

SIR THOMAS BROWNE'S
HYDRIOTAPHIA
AND THE
GARDEN OF CYRUS

EDITED BY THE LATE
W. A. GREENHILL, M.D. OXON.

MACMILLAN AND CO., LIMITED
ST. MARTIN'S STREET, LONDON

1911

CONTENTS.

[The ⁷references to HYDRIOTAPHIA and GARDEN OF CYRUS are to the pages of the first Edition, as given in the inner margins in this Edition.]

EDITOR'S PREFACE pp. xv-xviii.

APPENDIX.

I. LIST OF EDITIONS pp. xix-xxiv.

II. THE MEASUREMENTS OF THE SKULL OF SIR
THOMAS BROWNE. (By Charles Williams,
Esq., F.R.C.S.E., Norwich.) pp. xxv-xxvii.

III. ADDENDA ET CORRIGENDA IN C AND D, AND
ERRATA IN C pp. xxviii-xxxi.

~~HYDRIOTAPHIA, URN-BURIAL.~~ Pp. 1-71.

THE EPISTLE DEDICATORY pp. iii-viii.

CHAPTER I. Pp. 1-13.

P. 1. Shallowness of graves. 3. Two modes of disposing of
the dead. Burial the older. 4. Antiquity of burning the
dead. Extent of the practice of burning. 5. Roman ex-

amples of burning. 7. Practice of the Brahmins. Burning declined by the Chaldeans and Persians. 8. Egyptian tombs and mummies. Savage customs of the Scythians. 9. Practice of the early Christians. Practice of the Jews. 12. Sepulture of animals.

CHAPTER II. Pp. 14-29.

P. 14. Urns found at Walsingham. 15. Account of *ustrina*. The urns probably Roman. 16. Practices of the Romans. 17. Conjectural etymology of Iceni. Britain notably populous. Urns, coins, etc., found elsewhere. 18. Norman, Saxon, and Danish coins. 19. Ancient interment of coins. 20. Antiquity of these relics uncertain. 21. Cessation of the practice of burning the dead. 23. Various things found in the urns. 25. Form of burial among the Ancient Britons. Funerals of the Druids. 27. Customs of the northern nations. 28. Rollrich stones, and similar stones in Norway and Denmark.

CHAPTER III. Pp. 30-52.

P. 30. Sepulchres of the Jews (St. Matt. xxiii. 29). Description of Sepulchral Urns, and their covering. 32. Homeric Urn of Patroclus. 33. What was found in the Urns. 34. Laws of the Twelve Tables. Legend of St. Humbert. 36. Tomb of King Childerick. 37. Ancient customs as to mementos and inscriptions. The mean salary of Judas (St. Matt. xxviii. 3-10). 38. As to keeping ashes distinct. 39. Disregard of human life among the ancients. Jewish Hypogæum at Rome. 41. Cenotaph of Euripides. 42. Preservation of corpses. 43. Salamander's wool. 44. Effect of fire on various bodies. 45. The body a combustible lump. 46. Places of burial. Burying by high-ways. 47. Postures observed. Phœnician and Megarian practice. 48. Incorruptibility of human hair. Substance like Castile soap found in an hydropical subject. 49. Persian and Roman corpses. Durability of the body when buried. Phrenological conjecture. 50. Disquisition on skulls. 51. Tombs of the Patriarchs.

CHAPTER IV. Pp. 53-68.

P. 53. Ancient belief in the Resurrection. Variety of funeral rites. 54. Immortality of the soul. 55. Force of superstition. 56. Funeral flowers and plants. 57. Funerals of infants (Pliny, *Hist. Nat* vii. 15). 59. Closing of the eyes. Funeral Jesters. 60. Funerals of self-killers. 62. The Hades of Homer. Julius his soul in a star (Horace, *Od.* i. 12, 47). 64. Reflections on death and immortality. 66. Opinions of Epicurus. 67. Dread of annihilation.

CHAPTER V. Pp. 69-84.

P. 69. Duration of bones. 70. Reflections on the universal desire felt to be remembered after our death. Pulses of Methuselah. 71. Song of the Syrens—Homer. 72. Vanity of tombs. 73. Evening of the world. 75. Ambition of Cardan. 76. Good and bad fame. 77. Effect of sorrow. Oblivion shares with sorrow a great part even of our living being. 79. No immortality beneath the moon. Nothing immortal but immortality. Real immortality. 82. Contempt of monuments. Grandeur of tombs. 84. Conclusion.

CYRUS' GARDEN, OR THE QUINCUNX.

Pp. 72-160.

THE EPISTLE DEDICATORY. Pp. ix-xiii.

P. x. Envy will have nothing new. xi. Few generalities in nature. The Turks will have gardens hereafter. xiii. Pictures of Apelles.

CHAPTER I. Pp. 89-104.

P. 90. Of the Gardens of Antiquity. Garden of Paradise. 91. Pensile or Hanging Gardens of Babylon, ascribed to Semiramis. 92. Those of Nebuchodonosor. Persian origin of the name Paradise. 93. Cyrus, the elder, improved the Gardens of Babylon. Cyrus, the younger, a manual planter of gardens. 94. Xenophon's description of his plantation

at Sardis. 95. Explanation of the rhomboidal or lozenge formation. Compared to St. Andrew's cross. 97. The Egyptian *cruz ansata*. 98. The *Tenupha* of the Jewish rabbins. The quincunx much used by the ancients, little by the moderns. 99. Considerable, for its several commodities, mysticisms, parallelisms, and resemblances, both in nature and art. Used in the gardens of Babylon, and of Alcinous; the plantations of Diomedes' father; in those described by Theophrastus and Aristotle; and in later plantations. 101. Probably used by Noah, and if so, why not before the Flood. In Abraham's grove at Beersheba. 102. In the garden of Solomon. 103. In Paradise, the tree of knowledge would supply a centre and rule of decussation.

CHAPTER II. Pp. 105-120.

P. 105. The quincuncial form adopted in the Arts. It is employed in curious contrivances; in architecture; 106. In the crowns of the ancients; 108. Their beds, seats, lattices; 110. In nets, by lapidaries and sculptors; 111. In the rural charm against dodder, etc.; In the game of Pentalithismus; 112. In ligatures, and forcipal instruments; 113. In the Roman battalia; 115. And Grecian cavalry; 116. In the Macedonian phalanx. The ancient cities built in square or parallelogram. 117. The quincuncial form in the Labyrinth of Crete, probably in the ark, the table of shew-bread, and those of the law. 119. Several beds of the ancients mentioned.

CHAPTER III. Pp. 121-160.

P. 121. The quincuncial form observable in many of the works of nature. 122. To pass over the constellations, we find it in gypsum; in the asteria; in the *pili* of several plants; in the flowers and seed-heads of others; in some fruits; in the net-work of some sea-weeds; 124. In teazel, bur, thistle and elder; 126. In sunflower, fir-apples, etc.; 129. In the rudimental spring of seeds. The process of germination considered. 135. Digression, on the production of one creature from the body of another. 136. Explained of the *ichneumonidæ* and *entozoa*. 139. The number five exists

in many instances in the leaves and parts of flowers, and is remarkable in every circle. 142. Other instances of the number five. 143. In animal figurations; in some insects; and in honey-comb; 145. In the eyes, eggs, and cells of insects; in the skins of snakes; the tail of the beaver; 147. In the skins and feet of birds; the scales of fish; the skin of man, etc.; 149. In many of the internal membranes of man and animals. 152. The motion of animals quincuncial. 154. Cruciform appearances in many plants. 155. Various analogies traced in vegetables, animals, and insects. 158. Proportions in the motive parts of animals and birds, and obscurely in plants.

CHAPTER IV. Pp. 161-187.

P. 161. On the various conveniences and delights of the quincunx: in the due proportion of earth allowed by it; 162. In the room afforded for equal spreading of the trees, and the due circulation of air; 165. In the action of the sun; 167. In the greatest economy of space; 168. In mutual shelter from currents of wind. 170. Effect of oil and water on the germination of seeds. 171. Whether ivy would do less injury in this arrangement? 172. Great variety afforded by this order. 178. Grateful to the eye by its regular green shade. 181. Seeds lie in perpetual shade. 182. The order is agreeable to the eye, as consonant to the angles observable in the laws of optics and acoustics. 185. Plato chose this figure to illustrate the motion of the soul.

CHAPTER V. Pp. 188-202.

P. 188. On the mysteries and secrets of this order. Five the number of justice, called by Plutarch the divisive number, justly dividing the entities of the world. 191. The conjugal number. 192. Character of generation. 193. A stable number, as we never find animals with five legs, nor with ten. 194. This number often observed in Scriptural, medical, astrological, cabbalistical, magical examples. 201. Splendid concluding passage.

(Abridged for *Hydriotaphia*, from J; and for *Cyrus' Garden*, from I.)

NOTES ON HYDRIOTAPHIA . . .	pp. 161-174
NOTES ON CYRUS' GARDEN . . .	pp. 175-184

INDEXES.

I. AUTHORS QUOTED OR REFERRED TO . . .	pp. 185-190
II. NAMES OF PERSONS NOT AUTHORS, AND OF PLACES, ETC.	pp. 191-195
III. GENERAL AND GLOSSARIAL	pp. 196-208

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AND THE

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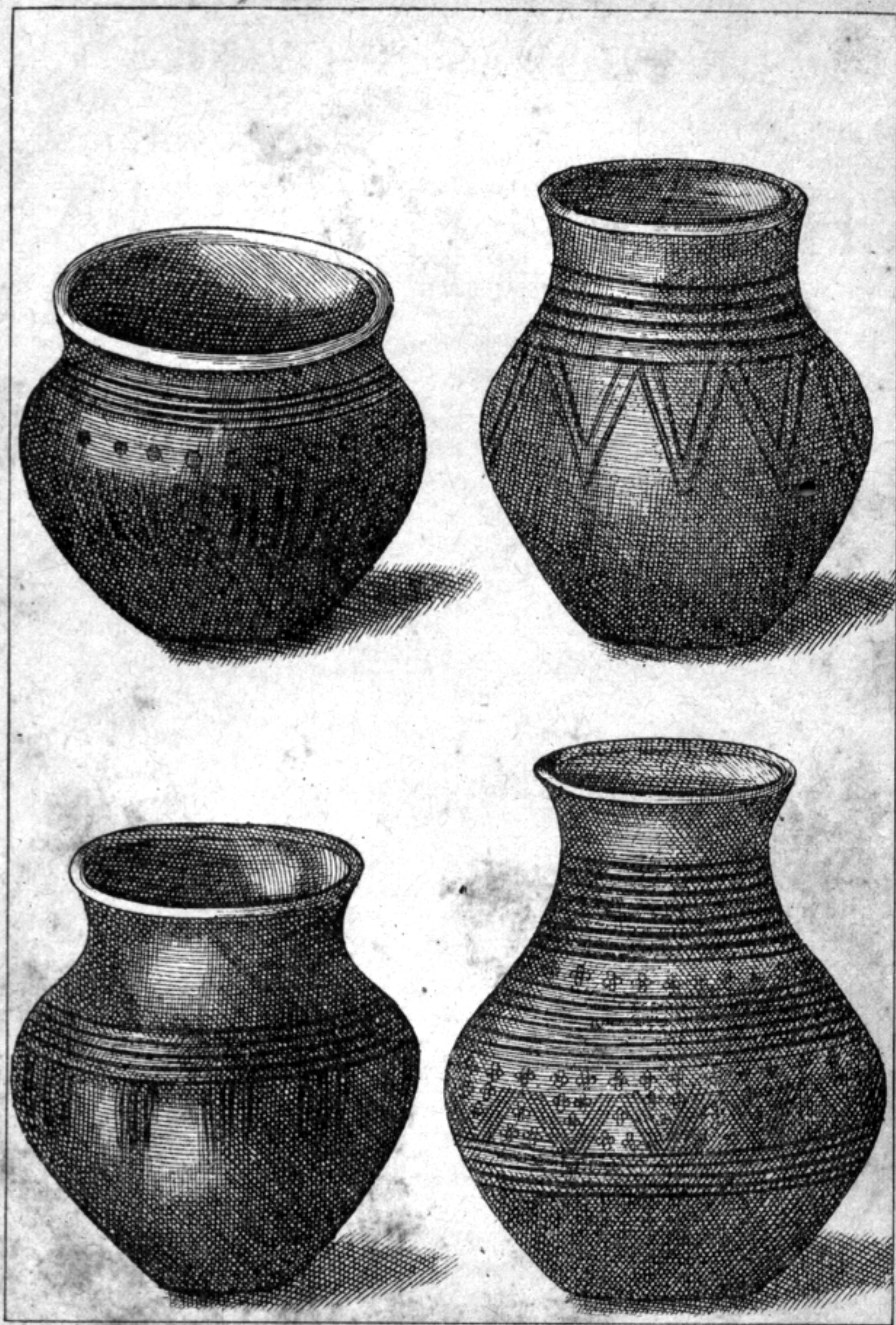
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En sum quod digitis Quinque Levatur onus.—PROPERT. [*Eleg.* iv. 11. 14].

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NOTES ON HYDRIOTAPHIA . . .	pp. 161-174
NOTES ON CYRUS' GARDEN . . .	pp. 175-184

INDEXES.

I. AUTHORS QUOTED OR REFERRED TO . . .	pp. 185-190
II. NAMES OF PERSONS NOT AUTHORS, AND OF PLACES, ETC.	pp. 191-195
III. GENERAL AND GLOSSARIAL	pp. 196-208

PREFACE.

THE *Hydriotaphia* and *Garden of Cyrus* were published first as one small octavo volume, in 1658, the Epistles Dedicatory being dated May 1. Sir Thomas Browne was then in his fifty-third year, and had been settled for twenty-two years in practice as a physician at Norwich. In the Bibliography which follows, a full list is given of the various editions which have appeared of these two "Discourses," as their author called them.

The *Hydriotaphia* has taken its place as an English classic, unique in its subject, and full of charm in the way in which that subject is handled. The *Garden of Cyrus* is not so well known, and contains less of Sir Thomas Browne's characteristic writing, but the elaborate learning with which the curious question is pursued has not failed to attract the lovers of quaint and recondite lore. It is worth notice, that these treatises were written when Cromwell held the supreme power in England. But nothing has interfered with

their philosophic calm and old-world learning; there is not a hint, except in one gentle complaint against "this ill-judging age," from which the reader could infer that any unusual events had disturbed the country.

In the preparation of this edition, no great difficulty was experienced in settling the text, and such *crucce* as presented themselves in the *Religio Medici* were almost entirely absent. At the same time, there were certain variations in the texts of different early editions, which required careful adjustment, and a considerable number of errors, not of any very great importance separately, which it has been the duty of an editor anxious to do full justice to his author to correct with care and with caution. It will not be without regret, that from the necessity of following Sir Thomas Browne's own directions, readers will see the words "gnawed out of our graves," in place of the much more poetic "knaved." In the Notes will be found a collation of all the editions published during the author's lifetime, and presumably subjected to his revision, with references also to later editions, by means of which the present settlement of the text has been arrived at. In the spelling and punctuation, it has not been thought desirable to follow the old editions, and both have been modernized freely.

A few words should be said as to the Notes. For

the *Hydriotaphia*, these were compiled mainly by Dr. Greenhill, partly from the annotations of previous editors, his obligations to whom are carefully acknowledged, and partly they are his own. In the case of the *Garden of Cyrus*, it was Dr. Greenhill's opinion, that any attempt to collect a body of notes upon the zoological, botanical and antiquarian subjects discussed, would be a failure, owing to the difference between the scientific learning of the seventeenth century and of the nineteenth. Readers to whom the treatise would be interesting, might be trusted, he thought, to have sufficient previous knowledge to enable them to follow the author in his investigations. Therefore, a few explanatory notes only have been added (and these, with two or three exceptions, not prepared by Dr. Greenhill), which are for the most part confined to giving references to some of the less obvious allusions in the text, and which attempt to do for the *Garden of Cyrus* in some degree what he did for the *Hydriotaphia*.

But the merit of the whole work belongs distinctly to Dr. Greenhill himself. He had been engaged upon it for some years; it was put aside from ill health and other causes, and was resumed, to be stopped suddenly, when very near completion, by his lamented death. No one knows better than the writer of these

lines, how much the book has lost by being deprived of Dr. Greenhill's final supervision. His learning, his critical acumen, his patient and sympathetic zeal, his unfailing loyalty to his author, as evidenced by his elaborate edition of the *Religio Medici*, made him eminently the one man who was most fit to introduce Sir Thomas Browne's writings to modern readers. All the praise that may be given to this book belongs to him; if any one finds any fault, the blame must be borne by a disciple who can follow his master *non passibus æquis* only.

It is right to add that several friends have been consulted at various times while this book was in preparation, for whose good offices sincere thanks are due. Among these are especially to be named the late J. Dykes Campbell, Esq., the Rev. W. D. Macray, the Rev. Edward Marshall, and R. D. Wilson, Esq. Very special help has been given by M. H. Wilkin, Esq., by the kind loan of his valuable copies of early editions of Sir Thomas Browne's works.

EDWARD H. MARSHALL.

HASTINGS,

June 22, 1895.

APPENDIX No. I.

LIST OF EDITIONS.

A. 1658. *Sm. 8vo. London, Brome.*

Title—"Hydriotaphia, Urne-buriall, or, A Discourse of the Sepulchrell Urnes lately found in Norfolk. Together with The Garden of Cyrus, or the Quincunciall, Lozenge, or Net-work Plantations of the Ancients, Artificially, Naturally, Mystically considered. With Sundry Observations. By Thomas Browne D. of Physick." *First* Edition. (*British Museum.*)

B. 1658. *Sm. Fol. London, Ekins.* "Printed for the Good of the Commonwealth."

Appended (with the *Religio Medici*) to the "*third*" edition of the *Pseudod. Epid.* Title—"Religio Medici: whereunto is added a Discourse, &c. . . . By Thomas Brown Doctour of Physick." Printed in double columns. *Second* Edition. (*British Museum.*)

It is impossible to say for certain whether this (B) is the *second* or the *third* edition. Wilkin calls it the *third*, and thinks that it came out after C, but offers nothing by way of proof. It is here supposed to be the *second* edition, because it is appended to the *third* edition of the *Vulgar Errors*, whereas C is appended to the

fourth; and also because it seems improbable that the editor could ever have seen C, as he has several times followed the text of A, even when the reading of C is better. However, it is a matter of little or no importance.

C. 1658. *4to. London, Brome.*

Appended to the "*fourth*" edition of the *Vulgar Errors*. Title—"Hydriotaphia, Urn Buriall, &c. By Thomas Browne, D. of Physick." *Third* Edition; with two pages of "Marginall Illustrations omitted or to be added to the Discourses of Urn Burial and of the Garden of Cyrus," and some Errata. (*British Museum.*)

C* = Errata in C.

D. 1669. *4to. London, Dod.*

Appended to the *fifth* edition of the *Vulgar Errors*. Title—"Hydriotaphia, Urn Burial, &c. By Thomas Browne, Dr. of Physick." *Fourth* edition; with the same two pages of "Marginall Illustrations," but without the *Errata*, which however had not been corrected in the text. The last edition published during the Author's lifetime. (*Wilkin.*)

E. 1686. *Folio, London, Brome.*

Appended to the *seventh* edition of *Vulgar Errors*, and *Religio Medici*, and prefixed to the *Garden of Cyrus* and certain *Miscellany Tracts*, forming the handsome volume called "The Works of the learned Sr. Thomas Brown, Kt. Doctor of Physick, late of Norwich," said to have been edited by Dr. (afterwards Abp.) Tenison, but probably for no other reason than that his name is appended to the prefatory notice to the *Miscellany Tracts*. *Fifth* Edition. (*British Museum.*)

F. 1736. 8vo. London, Curll (Price 1s. 6d.).

Title—"Hydriotaphia: or Urn-Burial. Two Discourses of the Sepulchral Urns found in Norfolk, 1658 and 1667." Contains also the *Brampton Vrms*, and chapters 1, 2 and 3 of the *Garden of Cyrus*. The first chapter of the *Urn Burial* is called the *Introduction*, and chapters 2 to 5 are called sections 1 to 4. Probably rather scarce. *Sixth* edition, though in the title-page wrongly described as *the fourth*. (*British Museum*.)

G. 1822. 12mo. Edinburgh, Blackwood; and London, Cadell.

Edited (together with the *Letter to a Friend* and the *Museum Clausum*) by "J. C.," viz. James Crossley of Manchester, with the title "Tracts by Sir Thomas Browne, Knight, M.D. A new Edition." Agrees very much with the text of F, and adopts the same division of sections. Probably rather scarce. *Seventh* Edition. (*British Museum*.)

H. 1831. Sm. 8vo. Cambridge (U. S.), Hilliard and Brown.

In the "Miscellaneous Works of Sir Thomas Browne," forming the third volume of the "Library of Old English Prose Writers," edited by the Rev. Alexander Young, D.D., of Boston. The volume contains also *Religio Medici*, and the *Letter to a Friend*, with some extracts from *Vulgar Errors*. *Eighth* Edition. (*Only the title-page and Preface seen by the present Editor*).

I. 1835. 8vo. London, Pickering.

In the third volume of Wilkin's edition of Browne's works; called the *eighth* edition, but really the *ninth*. (*British Museum*.)

J. 1838. *Sm. 8vo. London, Rickerby.*

Appended to the *Religio Medici*, edited by J. A. St. John. Contains an Introduction and some notes by the Editor, and a copious Table of Contents. *Tenth* Edition. (*British Museum.*)

This volume (which forms vol. 6 of a collection called "The Masterpieces of English Prose Literature" is also found with the date 1848 on the title-page, and without St. John's name. (*Univ. Coll., London.*)

K. 1847. *Sm. 8vo. London, H. G. Bohn.*

In the third volume of Browne's works, forming part of one of Bohn's "Libraries." An abridged reprint of Wilkin's edition (I). Called the *ninth* edition, but more properly the *eleventh*. (*British Museum.*)

The three volumes are also found with title-pages variously dated, from 1852 to 1884.

L. 1861. *Sm. 8vo. Boston (U. S.), Ticknor and Fields.*

In a volume edited by J. T. F. (viz. *James T. Fields*), appended to the *Religio Medici*, *Letter to a Friend*, and *Christian Morals*, and followed by extracts from the *Garden of Cyrus*, *Vulgar Errors*, and other writings. It contains a "Biographical sketch of the Author." *Twelfth* Edition. (*Not seen by the present Editor.*)

M. 1862. *Sm. 8vo. Boston (U. S.), Ticknor and Fields.*

A reprint of the preceding (or perhaps only a reprint title-page), called (*on the back* of the title-page) "*Second* Edition." *Thirteenth* edition. (*Editor.*)

N. 1869. *Sm. 8vo. London, Sampson Low, Son, and Marston.*

Appended to the *Religio Medici*, and followed by the *Letter to a Friend*. Edited, with an Introduction and Notes, by J. W. Willis Bund. The text is stated in the Introduction to be taken from E (1686). *Fourteenth Edition*. "Some of Browne's notes to that edition have been omitted, and most of the references, as they refer to books which are not likely to be met with by the general reader." (*British Museum*.)

O. 1886. *Sm. 8vo. London, Walter Scott.*

Appended to the *Religio Medici*, and followed by the essay *On Dreams*, the *Letter to a Friend*, and *Christian Morals*. With an Introduction by J. A. Symonds. Shortly after publication there was issued on a small piece of coloured paper a list of Errata, which, however, relates only to the Introduction. This volume is one of the "Camelot Classics." *Fifteenth Edition*. (*British Museum*.)

P. 1890. *8vo. London, Reeves and Turner.*

Appended to Aubrey's "Miscellanies," pp. 223-285. Called the "*tenth*" edition, but more properly the *sixteenth*. (*British Museum*.)

Q. 1892. *32mo. London, David Stott.*

Included in the *Religio Medici and Other Essays*, edited by D. Lloyd Roberts, M.D., F.R.C.P. Contains a Biographical Introduction by the Editor. The text is there said to be "reprinted from the edition of 1658 (the first), with the exception of a few typographical corrections, amended in the subsequent edition." *Seventeenth Edition*. (*British Museum*.)

R. 1893. 8vo. London, Whittingham.

Contains also the *Brampton Urns*; edited by Sir John Evans, K.C.B., F.R.S., F.S.A. . An elegant reprint of A, incorporating the Errata etc. in C, with an Introduction and Notes by the Editor. *Eighteenth Edition.* (*British Museum.*)

S. 1894. 8vo. Canterbury, G. Moreton.

Republished with the *Religio Medici*, *Letter to a Friend*, and *Christian Morals*, edited, with an "Illustrated Memoir" of Sir T. B., by G. B. M. A reprint of A, incorporating the Errata in C. *Nineteenth Edition.*

The GARDEN OF CYRUS is contained (either wholly or in part), in all the editions of the *Urn Burial* except those called G, H, J, N, O, P, Q, R and S.

APPENDIX No. II.

THE MEASUREMENTS OF THE SKULL OF SIR THOMAS BROWNE.

BY CHARLES WILLIAMS, F.R.C.S.E., NORWICH.

SIR THOMAS BROWNE died on Oct. 19, 1682, and was buried in the church of St. Peter Mancroft, Norwich. In 1840 his skull was "knaved out of its grave" by the sexton. It appears that some workmen who were employed in making a grave for the incumbent's wife accidentally broke into the vault which contained the coffin of Sir Thomas Browne. In some unexplained way they fractured the lid of the coffin, and thereby exposed the skeleton. The sexton did not consider it an act of sacrilege to take possession of the skull and to offer it for sale. Eventually the late Dr. Edward Lubbock became its possessor, and in 1845 the skull was deposited by him in the pathological museum of the Norfolk and Norwich Hospital, where it is still to be seen. It has recently been claimed by the vicar of St. Peter Mancroft, but unsuccessfully.

The measurements of the skull are expressed in English inches and tenths, and have recently been taken by means of Flower's craniometer, according to the plan suggested

and carried out so extensively by the late Dr. Barnard Davis, the possessor of 1,800 human skulls, recently deposited in the Museum of the Royal College of Surgeons of England, and to whom, as well as to Dr. Thurnham, the science of anthropology is so deeply indebted for the production of that great work, *Crania Britannica*. The skull may be placed in the dolichocephalic class. It is quite edentulous, but is in a state of excellent preservation. The forehead is remarkably low and depressed; the head is unusually long, the back part exhibiting a singular appearance of depth and capaciousness. The following are the measurements:—Internal capacity, in ounces avoirdupois of dry sand, 69 ounces. Circumference round the forehead about an inch above the naso-frontal suture and over the most prominent part of the occiput, 21.5 in. Fronto-occipital arch, from the fronto-nasal suture along the centre of the calvarium to the posterior edge of the foramen magnum, 15 in.—(a) length of the frontal portion, 5 in.; (b) length of the parietal portion, 5 in.; (c) length of the occipital portion, 5 in. Intermastoid arch, from the tip of one mastoid process across the vertex to the tip of the other, 14.5 in. Longitudinal diameter, or length from the glabella to the most prominent point of the occiput, the glabella being regarded as about an inch above the naso-frontal suture, 7.7 in. Transverse diameter, or greatest breadth—interparietal, 5.8 in.; intertemporal, 5.4 in.—(a) frontal breadth at the most divergent points of the bone in the coronal suture, 5 in.; (b) parietal breadth at the protuberances, 5.6 in.; (c) occipital breadth at the junction of the occipital with the posterior inferior angles of the parietals, 4.8 in. Height from the plane of the foramen magnum at its centre to that of the vertex, 5.1 in.; (a) frontal height,

5.5 in.; (*b*) parietal height, 5 in.; (*c*) occipital height, 4.8 in.; taken from the axis of the auditory foramina these measurements are respectively 4.3 in., 4 in., and 4.5 in. From one auditory foramen to the other—(*a*) over the most prominent part of the frontal bone, 11 in.; (*b*) over the parietal bones, 12 in.; (*c*) over the occipital bone, 13 in. Length of the face from the nasal suture to the tip of the chin, an allowance of 0.6 in. being made for the absent teeth and absorption of alveolar ridges, 4.5 in. Breadth of the face from the most prominent point of one zygomatic arch to that of the other, 5.2 in.; from the external border of one orbital ridge to that of the other, 4.2 in. Width of the lower jaw at the angles, 4 in. Proportion of the greatest breadth to the length (the latter taken as 100), 0.72. Proportion of the height to the length, 0.66. The above measurements were taken at the request of the late Dr. W. A. Greenhill of Hastings, who, at the time of his death in September, 1894, was engaged in preparing for the press a new edition of Sir Thomas Browne's *Urn Burial*. It was his wish "to make the account more complete by giving the measurements of that great man's skull." Is it not strange that one who meditated so deeply on the transitory duration of monuments and the great mutations of the world should have exemplified in his own relic his words to Thomas Le Gros? "But who knows the fate of his bones, or how often he is to be buried? Who hath the oracle of his ashes, or whither they are to be scattered?"

APPENDIX No. III.

ADDENDA ET CORRIGENDA IN C AND D.

¹ *Marginal Illustrations omitted, or to be added to the
Discourses of URN-BURIAL, and of the
GARDEN OF CYRUS.*

FIRST ED. ED. C.

- | | |
|-------|--|
| P. 19 | P. 5, l. 29.— <i>O Absolom, Absolom, Absolom.</i> 2 Sam. 18. |
| 22 | 9, l. 14.—Double Sepulture of <i>Abraham</i> . <i>Det mihi speluncam duplicem.</i> Gen. 23. |
| 43 | 16, l. 14.— <i>Pyrrhus</i> his Toe which could not be burnt.
Lamp of <i>Galvanus</i> : to which refers the note out of <i>Licetus</i> in whom it is to be seen and described. |
| 50 | 18, l. 37.— <i>Gariola</i> : that part in the Skeleton of an Horse, which is made by the hanch-bones.
Negro's skulls: for their extraordinary thicknesse. |
| 59 | 21, l. 32.—Four or five dayes: at least by some difference from living Eyes. |
| 61 | 22, l. 27.—Of the Masculine gender: in <i>Homer</i> , <i>Ψυχὴ ὀηβαίου Τειρεσίας σκήπτρον ἔχωρ.</i> |
| 61 | 22, l. 30.—Eat <i>Asphodelis</i> : in <i>Lucian</i> . |
| 75 | 27, l. 6.—Of the Mummies which men show in several Countries, giving them what Names they please; and unto some the Names of the old <i>Ægyptian</i> Kings out of <i>Herodotus</i> . |
| 76-7 | 27, l. 39.—First storie before the flood.
<i>Pagans</i> could doubt. <i>Euripides</i> .
Light in Ashes. According to the custome of the Jewes, who place a lighted wax-candle in a pot of ashes by the Corps. <i>Leo</i> . |

¹ This list of Marginal Illustrations is repeated in D, with the necessary correction of the pagination. The original spelling is retained here, and also in the Errata.

P. 81	P. 29, l. 11.—Wood, Pitch, a Mourner, and an Urne: according to the Epitaph of <i>Rufus</i> and <i>Beronica</i> in <i>Gruterus</i> , — <i>Nec ex</i> <i>Eorum bonis plus inventum est, quam</i> <i>Quod sufficeret ad emendam pyram</i> <i>Et picem quibus corpora cremarentur,</i> <i>Et præfica conductæ et olla emptæ.</i>
81	29, l. 13.—The Epitaph of <i>Gordianus</i> in Greek, Latine, Hebrew, Ægyptian, Arabick, defaced by <i>Licinius</i> the Emperour.
108	41, l. 35.—Medallions: the larger sort of Medals.
110	41, n.— <i>De armis scaccatis</i> , this refers to page 42. at Heralds.
109	42, l. 15.— <i>Reticulum jecoris</i> , in <i>Leviticus</i> .
112	43 n.—In <i>Eustathius</i> his Comment upon <i>Homer</i> .
116	44, l. 34.—The like foundation: Obelisks being erected upon a square base.
123	45 (6), l. penult.—Fathers of their Mother, 'Ενδὸν ἐμῶν λαγόνων μητρὸς ἔχω πατέρα.
124	45 (7), l. 14.—Solitarie Magot: there being a single Maggot found almost in every head.
127	48, l. 16.—Upon Pollards: upon pollard Oaks and Thorns.
135	51, l. 10.—While the <i>Julus</i> : These and more to be found upon our Oaks; not well described by any till the Edition of <i>Theatrum Botanicum</i> .
139	52, l. 18.—Number of Swallows eggs, which exceed not five.
148	55, l. 21.—Handed crosses: <i>cruces ansatæ</i> , being held by a finger in the circle.
150	56, l. 4.—No less then four: μεγάλη κοιλία, κεκρύφαλος, ἐχίνος, ἥνυστρον. Arist. <i>magnus venter</i> , <i>Reticulum</i> , <i>omasus</i> , <i>abomasus</i> . Gaza.
155	57, l. 40.—The stalk: below.
157	58, l. 19.—The russet Neck: to be observed in white young Lambs, which afterward vanisheth.
187	68, l. 16.— <i>Decussavit eum</i> . ἐχίασεν αὐτὸν ἐν τῷ παντί.
190	69, l. 26.—In many, as Hens, Bitterns, and long claw'd Fowls.
192	70, l. 15.—Nectar of the fift Planet. <i>Oscula quæ Venus</i> <i>Quinta parte sui Nectaris imbuat.</i>

¹ ERRATA IN C.

FIRST ED. ED. C.

[P. xi.] P. ult. Epist. 2nd, l. 11, read *in flowers*.[Plate] in the figures of the Urnes a fullpoint at *onus*.

P. 1	1, l. 4, read <i>Rake</i> .
2	1, l. 11, read <i>thousands of years</i> .
5	2, l. 40, read <i>burned</i> [according to].
14	6, l. 6, read <i>In</i> .
16	6, l. penult. read <i>Prasutagus</i> .
17	7, l. 15, read <i>unknown</i> .
18	7, l. 31, dele <i>with</i> .
20	8, l. 22, read <i>have made</i> .
27	11, l. 2, read <i>Ansgarius</i> .
30	11, l. 36, read <i>great persons</i> .
32	12, l. 19, read <i>and</i> .
36	13, l. ult. read <i>Rust</i> .
43	16, read <i>Lamp. Galvanus</i> . a fullpoint. <i>Marlianus</i> .
48	18, l. 5, read <i>gnawd</i> .
61	22, l. 24, read <i>Plato</i> .
62	22, l. 36, read <i>well</i> .
65	23, l. 42, dele <i>and</i> .
70	25, l. 15, read <i>stronger</i> .
76	27, l. 29, after <i>time</i> , these words to come in, [<i>without the favour of the everlasting register.</i>]
78	28, read <i>ρουν</i> .
81	29, l. 18, read <i>stage</i> .
83	29, l. ult. read <i>passed</i> .
94	37, l. 14, read <i>doubled</i> .
94	37, l. 14 (n.), read <i>εὐγνώμια</i> .
95	37, l. 19, read <i>Rectangular</i> .
98	38, l. 19, read <i>Tenupha</i> .
100	39, l. 17, read <i>Sons</i> .
109	42, l. 5, read <i>Chapiters</i> .
112	43, l. 13, for <i>and</i> read <i>which</i> .

¹ This list of 'Errata' is not reprinted in D, and the Errata themselves are not corrected.

FIRST ED.	ED. C.
P. 115	P. 44, l. (14) read <i>nurses</i> (<i>Narses</i> ?).
116	44, l. 24, read <i>first ranck</i> .
118	45, l. 18, read <i>Angles</i> .
119	45, l. 29, for <i>five</i> read <i>seven</i> .
122	46, l. 14, for <i>neck</i> read <i>head</i> .
123	46, l. 33, read <i>pineæ</i> .
124	47, l. (11), read <i>Teazel</i> .
130	49, l. 21, <i>roots</i> , add <i>and sprouts</i> .
133	50, l. 15, read <i>powers</i> .
134	50, l. 25, dele <i>second and</i> .
135	51, l. 4, after <i>trees</i> , adde, [<i>in a large acception it compriseth all vegetables, for the frutæx and suffrutæx are under the progression of trees.</i>]
135	51, l. 11, read <i>pill</i> .
139	52, l. 16, read <i>closing</i> .
141	53, l. 6, read <i>fifth touch</i> .
142	53, l. 21, read <i>bramble</i> .
142	53, l. 27, [read] <i>Delphinium</i> .
145	54, l. 17, read <i>pliant</i> .
154	57, l. (29), read <i>Aiain</i> .
156	58, l. 10, read <i>stars</i> .
162	59, l. penult., read <i>generality</i> .
166	61, l. 13, read <i>pot</i> .
173	63, l. 32 and 33, read <i>four</i> , dele <i>in every one</i> .
174	64, l. 1, read <i>stand not</i> .
181	66, l. 21, read <i>Pluto</i> .
186	68, l. 12, read <i>which was</i> .

**HYDRIOTAPHIA,
URN E-BURIALL,**

OR,
**A Discourse of the Sepulchrall
Urnes lately found in**

N O R F O L K.

Together with
The Garden of C Y R U S,
OR THE
Quincunciall, Lozenge, or
Net-work Plantations of the An-
cients, Artificially, Naturally,
Mystically Considered.
With Sundry Observations.

By Thomas Browne D. of Physick.

L O N D O N,
Printed for Hen. Brome at the Signe of the
Gun in Ivy-lane. 1658.



1st Edition, 1658.

p. iii

TO MY

WORTHY AND HONOURED FRIEND

THOMAS LE GROS,

OF CROSTWICK, ESQUIRE.

WHEN the funeral pyre was out, and the last valediction over, men took a lasting adieu of their interred friends, little expecting the curiosity of future ages should comment upon their ashes; and, having no old experience of the duration of their relicks, held no opinion of such after-considerations.

The Epistle
Dedicatory.

iv But who knows the fate of his bones, or how often he is to be buried? Who hath the oracle of his ashes, or whether they are to be scattered? (The relicks of many lie like the ruins of Pompeys¹, in all parts of the earth; and when they arrive at your hands, these may seem to have wandered far, who, in a direct and meridian travel², have but few miles of known earth between yourself and the pole.

¹ "Pompeios juvenes Asia atque Europa, sed ipsum Terra tegit Libyes."—[Martial, *Epigr.* v. 74.]

² Little directly but sea, between your house and Greenland.

The Epistle
Dedicatory.

That the bones of Theseus should be seen again in Athens¹ was not beyond conjecture and hopeful expectation: but that these should arise so opportunely to serve yourself was an hit of fate, and honour beyond prediction.

We cannot but wish these urns might have the effect of theatrical vessels and great Hippodrome urns² in Rome, to resound the acclamations and honour due unto you. But these are sad and sepulchral pitchers, which have no joyful voices; silently expressing old mortality, the ruins of forgotten times, and can only speak with life, how long in this corruptible frame some parts may be uncorrupted; yet able to outlast bones long unborn, and noblest pile among us³.

We present not these as any strange sight or spectacle unknown to your eyes, who have beheld the best of urns and noblest variety of ashes; who are yourself no slender master of antiquities, and can daily command the view of so many imperial faces; which raiseth your thoughts unto old things and consideration of times before you, when even living men were antiquities; when the living might exceed the dead, and to depart this world could not be properly said to go unto the greater number⁴. And so run up your thoughts upon the Ancient

¹ Brought back by Cimon. Plutarch.—[*Vita Cim.* § 8.]

² The great urns in the Hippodrome at Rome, conceived to resound the voices of people at their shows.

³ Worthily possessed by that true gentleman, Sir Horatio Townshend, my honoured friend.

⁴ "Abiit ad plures."

of Days, the antiquary's truest object, unto whom the eldest parcels are young, and earth itself an infant, and without Egyptian¹ account makes but small noise in thousands. The Epistle
Dedicatory.

We were hinted by the occasion, not caught the opportunity to write of old things, or intrude upon the antiquary. ✓ We are coldly drawn unto discourses of antiquities, who have scarce time before us to comprehend new things, or make out learned novelties. But seeing they arose, as they lay almost in silence among us, at least in short account suddenly passed over, we were very unwilling they should die again, and be buried twice among us.

vi Beside, to preserve the living, and make the dead to live, to keep men out of their urns, and discourse of human fragments in them, is not impertinent unto our profession; (whose study is life and death, who daily behold examples of mortality, and of all men least need artificial *mementos*, or coffins by our bedside, to mind us of our graves.)

'Tis time to observe occurrences, and let nothing remarkable escape us: the supinuity of elder days hath left so much in silence, or time hath so martyred the records, that the most industrious heads² do find no easy work to erect a new *Britannia*.

'Tis opportune to look back upon old times,

¹ Which makes the world so many years old.

² Wherein Mr. Dugdale hath excellently well endeavoured, and worthy to be countenanced by ingenuous and noble persons.

The Epistle
Dedicatory.

and contemplate our forefathers. Great examples grow thin, and to be fetched from the passed world. Simplicity flies away, and iniquity comes at long strides upon us. We have enough to do to make up ourselves from present and passed times, and the whole stage of things scarce serveth for our instruction. A complete piece of virtue must be made from the *centos* of all ages, as all the beauties of Greece could vii, make but one handsome Venus.

When the bones of King Arthur were digged up¹, the old race might think they beheld therein some originals of themselves; unto these of our urns none here can pretend relation, and can only behold the relicks of those persons, who, in their life giving the laws unto their predecessors, after long obscurity, now lie at their mercies. But, remembering the early civility they brought upon these countries, and forgetting long-passed mischiefs, we mercifully preserve their bones, and defile not their ashes.

In the offer of these antiquities we drive not at ancient families, so long outlasted by them. We are far from erecting your worth upon the pillars of your forefathers, whose merits you illustrate. We honour your old virtues, conformable unto times before you, which are the noblest armoury. And, having long experience of your friendly conversation, void of empty formality, full of freedom, constant and generous viii

¹ In the time of Henry the second.—Camden [*Britannia; Somersetshire*, col. 80, ed. 1722].

honesty, I look upon you as a gem of the old The Epistle
rock¹, and must profess myself even to urn and Dedicatory.
ashes,

Your ever faithful Friend

and Servant,

THOMAS BROWNE.

NORWICH, *May 1* [1658].

¹ "Adamas de rupe veteri præstantissimus."

HYDRIOTAPHIA,

URN-BURIAL.

CHAPTER I.

¹ **I**N the deep discovery of the subterranean [1]
world, a shallow part would satisfy some ^{Shallowiness}
enquirers; who, if two or three yards were open ^{of graves,}
about the surface, would not care to rake the
bowels of Potosi¹, and regions towards the
² centre. (Nature hath furnished one part of the
earth, and man another.) The treasures of time
lie high, in urns, coins, and monuments, scarce
below the roots of some vegetables. Time hath
endless rarities, and shows of all varieties;
which reveals old things in heaven, makes new
discoveries in earth, and even earth itself a
discovery. That great antiquity America lay
buried for thousands of years, and a large part
of the earth is still in the urn unto us.

Though, if Adam were made out of an extract [2]
of the earth, all parts might challenge a resti-
tution, yet few have returned their bones
far lower than they might receive them; not

CHAP. I. affecting the graves of giants, under hilly and heavy coverings, but content with less than their own depth, have wished their bones might lie soft, and the earth be light upon them. Even such as hope to rise again, would not be content with central interment, or so desperately to place their relicks as to lie beyond discovery, and in no way to be seen again; which happy contrivance hath made communication with our forefathers, and left unto our view some parts, which they never beheld themselves.

[3] Though earth hath engrossed the name, yet water hath proved the smartest grave; which in forty days swallowed almost mankind, and the living creation; fishes not wholly escaping, except the salt ocean were handsomely contempered by a mixture of the fresh element.

[4] Many have taken voluminous pains to determine the state of the soul upon disunion; but men have been most phantastical in the singular contrivances of their corporal dissolution: whilst the soberest nations have rested in two ways, of simple inhumation and burning.

Two modes
of disposing
of the dead.

[5] That carnal interment or burying was of the elder date, the old examples of Abraham and the patriarchs are sufficient to illustrate; and were without competition, if it could be made out that Adam was buried near Damascus, or Mount Calvary, according to some tradition. God himself, that buried but one, was pleased to make choice of this way, collectible from Scripture expression, and the hot contest be-

Burial the
older.

(Gen. xxiii.
& xxv. 9, 10.)
(Deut. xxxiv.
5, 6).

between Satan and the archangel, about discovering the body of Moses. But the practice of burning was also of great antiquity, and of no slender extent. For (not to derive the same from Hercules) noble descriptions there are hereof in the Grecian funerals of Homer, in the formal obsequies of Patroclus and Achilles; and somewhat elder in the Theban war, and solemn combustion of Menecæus, and Archemorus, contemporary unto Jair the eighth judge of Israel. Confirmable also among the Trojans, from the funeral pyre of Hector, burnt before the gates of Troy: and the burning of Penthesilea the Amazonian queen¹; and long continuance of that practice, in the inward countries of Asia; while as low as the reign of Julian, we find that the king of Chionia² burnt the body of his son, and interred the ashes in a silver urn.

CHAP. I.

Antiquity of
Burning the
dead.

(Jude 9.)

The same practice extended also far west³; [6] and, besides Herulians, Getes, and Thracians, was in use with most of the Celtæ, Sarmatians, Germans, Gauls, Danes, Swedes, Norwegians; not to omit some use thereof among Carthaginians and Americans. Of greater antiquity among the Romans than most opinion, or Pliny seems to allow: for (beside the old Table Laws of burning or burying within the city⁴, of making

Extent of the
practice of
burning.Roman
examples of
burning.

¹ Quintus Calaber [Smyrnæus, *Posthomer.*], lib. i.

² Gumbrates, king of Chionia, a country near Persia.—(Ammianus Marcellinus.)

³ Arnold. Montan. *Not. in Cæs. Commentar.* L. Gyraldus. Kirkmannus.

⁴ *XII. Tabul.* part i. *de Jure Sacro.* "Hominem mortuum in urbe ne sepelito, neve urito," tom. 2. "Rogum ascia ne polito,"

CHAP. I. the funeral fire with planed wood, or quenching the fire with wine), Manlius the consul burnt the body of his son: Numa, by special clause of his will, was not burnt but buried; and Remus was solemnly burnt, according to the description of Ovid¹.

[7] Cornelius Sylla was not the first whose body was burned in Rome, but of the Cornelian family; which, being indifferently, not frequently used before, from that time spread, and became the prevalent practice. Not totally pursued in the highest run of cremation; for when even crows were funerally burnt, Poppæa the wife of Nero found a peculiar grave interment. Now as all customs were founded upon some bottom of reason, so there wanted not grounds for this; according to several apprehensions of the most rational dissolution. Some being of the opinion⁶ of Thales, that water was the original of all things, thought it most equal to submit unto the principle of putrefaction, and conclude in a moist relentment. Others conceived it most natural to end in fire, as due unto the master principle in the composition, according to the doctrine of Heraclitus; and therefore heaped up large piles, more actively to waft them toward that element, whereby they also declined a visible degeneration into worms, and left a lasting parcel of their composition.

Opinions of
Thales and
Heraclitus.

tom. 4. Item Vigeneri *Annotat. in Livium*, et Alex. ab Alex. [*Genial. Dies*], cum Tiraquello. Rosinus cum Dempster.

¹ "Ultima prolato subdita flamma rogo."—*Fast.* lib. iv. l. 856, cum Car. Neapol. Anaptyxi.

Some apprehended a purifying virtue in fire, CHAP. I.
refining the grosser *conmixture*, and firing out [8]
the æthereal particles so deeply immersed in it.
And such as by tradition or rational conjecture
held any hint of the final pyre of all things, or
that this element at last must be too hard for all
the rest, might conceive most naturally of the
fiery dissolution. Others pretending no natural
grounds, politickly declined the malice of ene-
mies upon their buried bodies. Which con-
sideration led Sylla unto this practice; who
having thus served the body of Marius, could
not but fear a retaliation upon his own; enter-
tained after in the civil wars, and revengeful
contentions of Rome.

But, as many nations embraced, and many [9]
left it indifferent, so others too much affected,
or strictly declined this practice. The Indian Practice of
the Brah-
mins.
Brachmans seemed too great friends unto fire,
who burnt themselves alive, and thought it the
noblest way to end their days in fire; according
to the expression of the Indian, burning himself
at Athens¹, in his last words upon the pyre
unto the amazed spectators, "Thus I make my-
self immortal."

But the Chaldeans, the great idolaters of fire, [10]
abhorred the burning of their carcasses, as a pol-
lution of that deity. The Persian magi declined Burning de-
clined by the
Chaldeans
and Persians.
it upon the like scruple, and being only solicitous
about their bones, exposed their flesh to the
prey of birds and dogs. And the Parsees now

¹ And therefore the inscription of his tomb was made accord-
ingly.—Nic. Damasc.

CHAP. I. in India, which expose their bodies unto vultures, and endure not so much as *feretra* or biers of wood, the proper fuel of fire, are led on with such niceties. But whether the ancient Germans, who burned their dead, held any such fear to pollute their deity of Herthus, or the 8 Earth, we have no authentic conjecture.

Egyptian
tombs and
mummies.

[11] The Egyptians were afraid of fire, not as a deity, but a devouring element, mercilessly consuming their bodies, and leaving too little of them; and therefore by precious embalmments, deposite in dry earths, or handsome inclosure in glasses, contrived the notablest ways of integral conservation. And from such Egyptian scruples, imbibed by Pythagoras, it may be conjectured that Numa and the Pythagorical sect first waved the fiery solution.

Savage cus-
toms of the
Scythians.

[12] The Scythians, who swore by wind and sword, that is, by life and death, were so far from burning their bodies, that they declined all interment, and made their graves in the air: and the Ichthyophagi, or fish-eating nations about Egypt, affected the sea for their grave; thereby declining visible corruption, and restoring the debt of their bodies. Whereas the old heroes, in Homer, dreaded nothing more than water or drowning; probably upon the old opinion of the fiery substance of the soul, only extinguishable by that element; and therefore the poet 9 emphatically implieth the total destruction in this kind of death, which happened to Ajax Oileus¹.

¹ Which Magius reads ἐξαπόλωλε.

The old Balearians¹ had a peculiar mode, for CHAP. I
they used great urns and much wood, but no [13]
fire in their burials, while they bruised the flesh
and bones of the dead, crowded them into urns,
and laid heaps of wood upon them. And the
Chinese² without cremation or urnal interment
of their bodies, make use of trees and much
burning, while they plant a pine-tree by their
grave, and burn great numbers of printed
draughts of slaves and horses over it, civilly
content with their companies *in effigy*, which
barbarous nations exact unto reality.

Christians abhorred this way of obsequies, [14]
and though they sticked not to give their bodies
to be burned in their lives, detested that mode
after death; affecting rather a depositure than
absumption, and properly submitting unto the
sentence of God, to return not unto ashes but
unto dust again, conformable unto the practice
10 of the patriarchs, the interment of our Saviour,
of Peter, Paul, and the ancient martyrs. And
so far at last declining promiscuous interment
with Pagans, that some have suffered ecclesias-
tical censures³, for making no scruple thereof.

The Musselman believers will never admit [15]
this fiery resolution. For they hold a present
trial from their black and white angels in the
grave; which they must have made so hollow,
that they may rise upon their knees.

The Jewish nation, though they entertained [16]

¹ Diodorus Siculus [lib. v. c. 18].

² Ramusius in *Navigat.*

³ Martialis the Bishop.—Cyprian [*Epist.* 67. § 6].

CHAP. I. the old way of inhumation, yet sometimes ad-
 Practice of the Jews. mitted this practice. For the men of Jabesh
 burnt the body of Saul; and by no prohibited
 practice, to avoid contagion or pollution, in time
 of pestilence, burnt the bodies of their friends¹.
 And when they burnt not their dead bodies, yet
 sometimes used great burnings near and about
 them, deducible from the expressions concerning
 Jehoram, Zedechias, and the sumptuous pyre of
 Asa. And were so little averse from Pagan
 burning, that the Jews lamenting the death of
 Cæsar, their friend and revenger on Pompey,
 frequented the place where his body was burnt 11
 for many nights together². And as they raised
 noble monuments and mausoleums for their own
 nation³, so they were not scrupulous in erecting
 some for others, according to the practice of
 Daniel, who left that lasting sepulchral pile in
 Ecbatana, for the Median and Persian kings⁴.

[17] But even in times of subjection and hottest
 use, they conformed not unto the Roman practice
 of burning; whereby the prophecy was secured
 concerning the body of Christ, that it should not
 see corruption, or a bone should not be broken;
 which we believe was also providentially pre-
 vented, from the soldier's spear and nails that
 passed by the little bones both in his hands and
 feet; not of ordinary contrivance, that it should

¹ Amos vi. 10.

² Sueton. *Vita Jul. Cæs.* [c. 84].

³ As that magnificent sepulchral monument erected by
 Simon, 1 Macc. xiii. [27, &c.].

⁴ Κατασκευάσμα θαυμασίως πεποιημένον, whereof a Jewish
 priest had always the custody, unto Josephus his days.—*Jos.*
Antiq. lib. x. [c. 11. § 7].

not corrupt on the cross, according to the laws of Roman crucifixion ; or an hair of his head perish, though observable in Jewish customs, to cut the hairs of malefactors. CHAP. I.

Nor in their long cohabitation with Egyptians, [18] crept into a custom of their exact embalming, wherein deeply slashing the muscles, and taking out the brains and entrails, they had broken the subject of so entire a resurrection, nor fully answered the types of Enoch, Elijah, or Jonah, which yet to prevent or restore, was of equal facility unto that rising power, able to break the fasciations and bands of death, to get clear out of the cerecloth, and an hundred pounds of ointment, and out of the sepulchre before the stone was rolled from it.

But though they embraced not this practice [19] of burning, yet entertained they many ceremonies agreeable unto Greek and Roman obsequies. And he that observeth their funeral feasts, their lamentations at the grave, their music, and weeping mourners ; how they closed the eyes of their friends, how they washed, anointed, and kissed the dead ; may easily conclude these were not mere Pagan civilities. But whether that mournful burthen, and treble calling out after Absalom ¹, had any reference unto the last conclamation, and triple valediction, used by other nations, we hold but a wavering conjecture.

13 Civilians make sepulture but of the law of [20] nations, others do naturally found it and dis- Sepulture of animals.

¹ "O Absalom, Absalom, Absalom !" — 2 Sam. xviii. 33.

CHAP. I. cover it also in animals. They that are so thick-skinned as still to credit the story of the *Phœnix*, may say something for animal burning. More serious conjectures find some examples of sepulture in elephants, cranes, the sepulchral cells of pismires, and practice of bees, — which civil society carrieth out their dead, and hath exequies, if not interments.

CHAPTER II.

THE solemnities, ceremonies, rites of their [1] cremation or internment, so solemnly delivered by authors, we shall not disparage our reader to repeat. Only the last and lasting part in their urns, collected bones and ashes, we cannot wholly omit, or decline that subject, which occasion lately presented, in some discovered among us.

In a field of Old Walsingham, not many [2] months past, were dugged up between forty and fifty urns, deposited in a dry and sandy soil, not a yard deep, nor far from one another. Not all strictly of one figure, but most answering these described: some containing two pounds of bones, distinguishable in skulls, ribs, jaws, thigh bones, and teeth, with fresh impressions of their combustion; besides the extraneous substances, like pieces of small boxes, or combs handsomely wrought, handles of small brass instruments, brazen nippers, and in one some kind of opal¹.

Urn found
at Walsing-
ham.

¹ In one sent me by my worthy friend, Dr. Thomas Witherley of Walsingham.

CHAP. II. Near the same plot of ground, for about six 15

[3] yards compass, were dugged up coals and incinerated substances, which begat conjecture that this was the *ustrina* or place of burning their bodies, or some sacrificing place unto the *manes*, which was properly below the surface of the ground, as the *aræ* and altars unto the gods and heroes above it.

Account of
ustrina.

The urns
probably
Roman.

[4] That these were the urns of Romans from the common custom and place where they were found, is no obscure conjecture, not far from a Roman garrison, and but five miles from Brancaster, set down by ancient record under the name of Brannodunum. And where the adjoining town, containing seven parishes, in no very different sound, but Saxon termination, still retains the name of Burnham, which being an early station, it is not improbable the neighbour parts were filled with habitations, either of Romans themselves, or Britons Romanized, which observed the Roman customs.

Practices of
the Romans.

[5] Nor is it improbable, that the Romans early possessed this country. For though we meet not with such strict particulars of these parts 16 before the new institution of Constantine and military charge of the count of the Saxon shore, and that about the Saxon invasions, the Dalmatian horsemen were in the garrison of Brancaster; yet in the time of Claudius, Vespasian, and Severus, we find no less than three legions dispersed through the province of Britain. And as high as the reign of Claudius a great overthrow was given unto the Iceni, by the Roman

A.D. 50.



lieutenant Ostorius. Not long after, the country was so molested, that, in hope of a better state, Prasutagus bequeathed his kingdom unto Nero and his daughters; and Boadicea, his queen, fought the last decisive battle with Paulinus. After which time, and conquest of Agricola, the lieutenant of Vespasian, probable it is, they wholly possessed this country, ordering it into garrisons or habitations best suitable with their securities; and so some Roman habitations not improbable in these parts, as high as the time of Vespasian, where the Saxons after seated, in whose thin-filled maps we yet find the name of

17 Walsingham. Now if the Iceni were but Gam-madims, Anconians, or men that lived in an angle, wedge, or elbow of Britain, according to the original etymology, this country will challenge the emphatical appellation, as most properly making the elbow or *iken* of Icenia.

Conjectural
etymology of
Iceni.

That Britain was notably populous is undeniable, from that expression of Cæsar¹. That the Romans themselves were early in no small numbers, seventy thousand, with their associates, slain by Boadicea, affords a sure account. And though not many Roman habitations are now known, yet some, by old works, rampiers, coins, and urns, do testify their possessions. Some urns have been found at Castor, some also about Southcreek, and, not many years past, no less than ten in a field at Buxton², not near any

[6]

Britain no-
tably popu-
lous.

Urns, coins,
&c., found
elsewhere.

¹ "Hominum infinita multitudo est, creberrimæque ædificia fere Gallicis consimilia."—Cæs. *De Bello Gal.* l. v. [c. 12.]

² In the ground of my worthy friend Robert Jegon, Esq.;

CHAP. II. recorded garrison. Nor is it strange to find Roman coins of copper and silver among us; of Vespasian, Trajan, Adrian, Commodus, Antoninus, Severus, &c.; but the greater number of Dioclesian, Constantine, Constans, Valens, with many of Victorinus, Posthumius, Tetricus, and the thirty tyrants in the reign of Gallienus; and some as high as Adrianus have been found 18 about Thetford, or Sitomagus, mentioned in the *Itinerary* of Antoninus, as the way from Venta or Castor unto London¹. But the most frequent discovery is made at the two Castors by Norwich and Yarmouth², at Burghcastle, and Brancaster³.

[7] Besides the Norman, Saxon, and Danish pieces of Cuthred, Canutus, William, Matilda⁴, and others, some British coins of gold have been dispersedly found, and no small number of silver pieces near Norwich⁵, with a rude head upon the obverse, and an ill-formed horse on the reverse, with inscriptions *Ic. Duro. T.*;

wherein some things contained were preserved by the most worthy Sir William Paston, Baronet.

¹ From Castor to Thetford the Romans accounted thirty-two miles, and from thence observed not our common road to London, but passed by *Combretonium ad Ansam, Canonium, Caesaromagus*, &c. by Bretenham, Coggeshall, Chelmsford, Burntwood, &c.

² Most at Castor by Yarmouth, found in a place called East-blondyburgh Furlong, belonging to Mr. Thomas Wood, a person of civility, industry, and knowledge in this way, who hath made observation of remarkable things about him, and from whom we have received divers silver and copper coins.

³ Belonging to that noble gentleman, and true example of worth, Sir Ralph Hare, Baronet, my honoured friend.

⁴ A piece of Maud, the Empress, said to be found in Buckenham Castle, with this inscription,—“*Elle n'a elle.*”

⁵ At Thorpe.

whether implying Iceni, Durotriges, Tascia, or Trinobantes, we leave to higher conjecture. Vulgar chronology will have Norwich Castle as
 19 old as Julius Cæsar; but his distance from these parts, and its gothick form of structure, abridgeth such antiquity. The British coins afford conjecture of early habitation in these parts, though the city of Norwich arose from the ruins of Venta; and though, perhaps, not without some habitation before, was enlarged, builded, and nominated by the Saxons. In what bulk or populosity it stood in the old East-Angle monarchy tradition and history are silent. Considerable it was in the Danish eruptions, when Sueno burnt Thetford and Norwich¹, and Ulfketel, the governor thereof, was able to make some resistance, and after endeavoured to burn the Danish navy.

How the Romans left so many coins in [8] countries of their conquests seems of hard resolution; except we consider how they buried them under ground when, upon barbarous invasions, they were fain to desert their habitations in most part of their empire, and the strictness of their laws forbidding to transfer them to any other uses: wherein the Spartans² were singular, who, to make their copper money useless, con-
 20 tempered it with vinegar. That the Britons left any, some wonder, since their money was iron and iron rings before Cæsar; and those of after-stamp by permission, and but small in

Ancient interment of coins.

¹ Brompton Abbas Jorvalensis.

² Plut. *Vita Lycurgi* [§ ix.].

CHAP. II. bulk and bigness. That so few of the Saxons remain, because, overcome by succeeding conquerors upon the place, their coins, by degrees, passed into other stamps and the marks of after-ages.

[9] Than the time of these urns deposited, or
 Antiquity of these relics uncertain. precise antiquity of these relicks, nothing of more uncertainty; for since the lieutenant of Claudius seems to have made the first progress into these parts, since Boadicea was overthrown by the forces of Nero, and Agricola put a full end to these conquests, it is not probable the country was fully garrisoned or planted before; and, therefore, however these urns might be of later date, not likely of higher antiquity.

[10] And the succeeding emperors desisted not from their conquests in these and other parts, as testified by history and medal-inscription yet extant: the province of Britain, in so divided a distance from Rome, beholding the faces of many imperial persons, and in large account; 21 no fewer than Cæsar, Claudius, Britannicus, Vespasian, Titus, Adrian, Severus, Commodus, Geta, and Caracalla.

[11] A great obscurity herein, because no medal or emperor's coin enclosed, which might denote the date of their interments; observable in many urns, and found in those of Spitalfields, by London¹, which contained the coins of Claudius, Vespasian, Commodus, Antoninus, attended with lacrymatories, lamps, bottles of liquor, and other appurtenances of affectionate

¹ Stowe's *Survey of London*.

superstition, which in these rural interments were wanting. CHAP. II.

Some uncertainty there is from the period [12] or term of burning, or the cessation of that practice. Macrobius affirmeth it was disused in his days; but most agree, though without authentic record, that it ceased with the Antonini,—most safely to be understood after the reign of those emperors which assumed the name of Antoninus, extending unto Heliogabalus. Not strictly after Marcus; for about fifty years later, we find the magnificent burning and consecration of Severus; and, if we so fix this period or cessation, these urns will challenge above thirteen hundred years.

Cessation of the practice of burning the dead.

But whether this practice was only then left [13] by emperors and great persons, or generally about Rome, and not in other provinces, we hold not authentic account; for after Tertullian, in the days of Minucius, it was obviously objected upon Christians, that they condemned the practice of burning¹. And we find a passage in Sidonius², which asserteth that practice in France unto a lower account. And, perhaps, not fully discussed till Christianity fully established, which gave the final extinction to these sepulchral bonfires.

Whether they were the bones of men, or [14] women, or children, no authentic decision from ancient custom in distinct places of burial.

¹ "Execrantur rogos, et damnant ignium sepulturam."—*Min. Oct.* [c. 11].

² *Sidon. Apollinaris* [lib. iii. ep. 5].

CHAP. II. Although not improbably conjectured, that the double sepulture or burying-place of Abraham ¹, had in it such intention. But from exility of bones, thinness of skulls, smallness of teeth, ribs, and thigh bones, not improbable that many thereof were persons of minor age, or women. Con- ²³
 firmable also from things contained in them. In most were found substances resembling combs, plates like boxes, fastened with iron pins, and handsomely overwrought like the necks or bridges of musical instruments; long brass plates overwrought like the handles of neat implements; brazen nippers, to pull away hair; and in one a kind of opal, yet maintaining a bluish colour.

Various
things found
in the urns.

[15] Now that they accustomed to burn or bury with them, things wherein they excelled, delighted, or which were dear unto them, either as farewells unto all pleasure, or vain apprehension that they might use them in the other world, is testified by all antiquity, observable from the gem or beryl ring upon the finger of Cynthia, the mistress of Propertius, when after her funeral pyre her ghost appeared unto him; and notably illustrated from the contents of that Roman urn preserved by Cardinal Farnese ², wherein besides great number of gems with heads of gods and goddesses, were found an ape of agath, a grasshopper, an elephant of amber, a crystal ball, three glasses, two spoons, ²⁴ and six nuts of crystal; and beyond the content

¹ "Det mihi speluncam duplicem."—Gen. xxiii. [9].

² Vigeneri *Annot. in 4 Liv.*

of urns, in the monument of Childerick the First¹, and fourth king from Pharamond, casually discovered three years past at Tournay, restoring unto the world much gold richly adorning his sword, two hundred rubies, many hundred imperial coins, three hundred golden bees, the bones and horse-shoes of his horse interred with him, according to the barbarous magnificence of those days in their sepulchral obsequies. Although, if we steer by the conjecture of many and Septuagint expression, some trace thereof may be found even with the ancient Hebrews, not only from the sepulchral treasure of David, but the circumcision knives which Joshua also buried.

Some men, considering the contents of these [16] urns, lasting pieces and toys included in them, and the custom of burning with many other nations, might somewhat doubt whether all urns found among us, were properly Roman relicks, or some not belonging unto our British, Saxon, or Danish forefathers.

25 In the form of burial among the ancient [17] Britons, the large discourses of Cæsar, Tacitus, and Strabo are silent. For the discovery whereof, with other particulars, we much deplore the loss of that letter which Cicero expected or received from his brother Quintus, as a resolution of British customs; or the account which might have been made by Scribonius Largus, the physician, accompanying the Emperor Claudius, who might have also

Form of
burial among
the Ancient
Britons.

¹ Chifflet, in *Anast. Childer.*

CHAP. II. discovered that frugal bit of the old Britons¹, which in the bigness of a bean could satisfy their thirst and hunger.

[18] But that the Druids and ruling priests used to burn and bury, is expressed by Pomponius; that Bellinus, the brother of Brennus, and king of Britons, was burnt, is acknowledged by Polydorus, as also by Amandus Zierexensis in *Historia*, and Pineda in his *Universa Historia* (Spanish). That they held that practice in Gallia, Cæsar expressly delivereth. Whether the Britons (probably descended from them, of like religion, language, and manners) did not sometimes make use of burning, or whether at least such as were after civilized unto the Roman life and manners, conformed not unto 26 this practice, we have no historical assertion or denial. But since, from the account of Tacitus, the Romans early wrought so much civility upon the British stock, that they brought them to build temples, to wear the gown, and study the Roman laws and language, that they conformed also unto their religious rites and customs in burials, seems no improbable conjecture.

[19] That burning the dead was used in Sarmatia is affirmed by Gaguinus; that the Sueons and Gothlanders used to burn their princes and great persons, is delivered by Saxo and Olaus; that this was the old German practice, is also asserted by Tacitus. And though we are bare in historical particulars of such obsequies in this island, or that the Saxons, Jutes, and Angles

¹ *Dionis excerpta* per Xiphilin. in Severo [lxxvi. 12].

burnt their dead, yet came they from parts where 'twas of ancient practice; the Germans using it, from whom they were descended. And even in Jutland and Sleswick in Anglia Cymbrica, urns with bones were found not many years before us¹.

27 But the Danish and northern nations have [20] raised an era or point of compute from their custom of burning their dead²: some deriving it from Unguinus, some from Frotho the Great, who ordained by law, that princes and chief commanders should be committed unto the fire, though the common sort had the common grave interment. So Starkatterus, that old hero, was burnt, and Ringo royally burnt the body of Harold the king slain by him. Customs of the northern nations

What time this custom generally expired in [21] that nation, we discern no assured period; whether it ceased before Christianity, or upon their conversion, by Ansgarius the Gaul, in the time of Ludovicus Pius the son of Charles the Great, according to good computes; or whether it might not be used by some persons, while for an hundred and eighty years Paganism and Christianity were promiscuously embraced among them, there is no assured conclusion. About which times the Danes were busy in England, and particularly infested this country; where many castles and strongholds were built by them, or against them, and great number of names and families still derived from them.

28 But since this custom was probably disused before their invasion or conquest, and the Romans

¹ Roisold.

² Brendetyde. Ild tyde.

CHAP. II. confessedly practised the same since their possession of this island, the most assured account will fall upon the Romans, or Britons Romanized.

[22] However, certain it is, that urns conceived of no Roman original, are often dugged up both in Norway and Denmark, handsomely described, and graphically represented by the learned physician Wormius¹. And in some parts of Denmark in no ordinary number, as stands delivered by authors exactly describing those countries². And they contained not only bones, but many other substances in them, as knives, pieces of iron, brass, and wood, and one of Norway a brass gilded jew's-harp.

Rollrich
stones, and
similar
stones in
Norway and
Denmark.

[23] Nor were they confused or careless in disposing the noblest sort, while they placed large stones in circle about the urns or bodies which they interred: somewhat answerable unto the monument of Rollrich stones in England³, or sepulchral monument probably erected by Rollo, who after conquered Normandy; where 'tis not ²⁹ improbable somewhat might be discovered. Meanwhile to what nation or person belonged that large urn found at Ashbury⁴, containing mighty bones, and a buckler; what those large urns found at Little Massingham⁵; or why the Anglesea urns are placed with their mouths downward, remains yet undiscovered.

¹ Olai Wormii, *Monumenta et Antiquitat. Dan.*

² Adolphus Cyprius, *Annal. Sleswick.*, "urnis adeo abundabat collis," &c.

³ In Oxfordshire.—Camden [*Britann.* col. 294 sq.].

⁴ In Cheshire, Twinus, *De rebus Albionis* [lib. ii. p. 153].

⁵ In Norfolk, Hollingshead.

CHAPTER III.

30 **P**LAISTERED and whited sepulchres were [1]
 anciently affected in cadaverous and cor- Sepulchres
of the Jews.
 rupted burials; and the rigid Jews were wont
 to garnish the sepulchres of the righteous¹.
 Ulysses, in Hecuba, cared not how meanly he
 lived, so he might find a noble tomb after death².
 Great persons affected great monuments; and
 the fair and larger urns contained no vulgar
 ashes, which makes that disparity in those
 which time discovereth among us. The pre- Description
of sepulchral
urns, and
their cover-
ing.
 sent urns were not of one capacity, the largest
 containing above a gallon, some not much above
 half that measure; nor all of one figure, wherein
 there is no strict conformity in the same or
 different countries; observable from those repre-
 sented by Casalius, Bosio, and others, though
 all found in Italy; while many have handles,
 ears, and long necks, but most imitate a cir-
 31 cular figure, in a spherical and round compo-
 sure; whether from any mystery, best duration
 or capacity, were but a conjecture. But the

¹ Matt. xxiii. [29].

² Euripides [*Hec.* v. 317].

CHAP. III. common form with necks was a proper figure, making our last bed like our first; nor much unlike the urns of our nativity while we lay in the nether part of the earth¹, and inward vault of our microcosm. Many urns are red, these but of a black colour, somewhat smooth, and dully sounding, which begat some doubt, whether they were burnt, or only baked in oven or sun, according to the ancient way, in many bricks, tiles, pots, and testaceous works; and, as the word *testa* is properly to be taken, when occurring without addition and chiefly intended by Pliny, when he commendeth bricks and tiles of two years old, and to make them in the spring. Nor only these concealed pieces, but the open magnificence of antiquity, ran much in the artifice of clay. Hereof the house of Mausolus was built, thus old Jupiter stood in the Capitol, and the *statua* of Hercules, made in the reign of Tarquinius Priscus, was extant in Pliny's days. And such as declined burning or 32 funeral urns, affected coffins of clay, according to the mode of Pythagoras, and way preferred by Varro. But the spirit of great ones was above these circumscriptions, affecting copper, silver, gold, and porphyry urns, wherein Severus lay, after a serious view and sentence on that which should contain him². Some of these urns were thought to have been silvered over, from sparklings in several pots, with small

¹ Psal. lxxiii. [9].

² Χωρήσεις τὸν ἄνθρωπον, ἐν ᾗ οἰκουμένη οὐκ ἐχώρησεν.—
Dion. [lib. lxxvi. ; Severus § 15].

tinsel parcels; uncertain whether from the CHAP. III.
earth, or the first mixture in them.

Among these urns we could obtain no good [2]
account of their coverings; only one seemed
arched over with some kind of brick-work. Of
those found at Buxton, some were covered with
flints, some, in other parts, with tiles; those
at Yarmouth Caster were closed with Roman
bricks, and some have proper earthen covers
adapted and fitted to them. But in the Ho-
merical urn of Patroclus, whatever was the
solid tegument, we find the immediate covering
33 to be a purple piece of silk: and such as had
no covers might have the earth closely pressed
into them, after which disposure were probably
some of these, wherein we found the bones and
ashes half mortared unto the sand and sides of
the urn, and some long roots of quich, or dog's-
grass, wreathed about the bones.

Homeral
urn of
Patroclus.

No lamps, included liquors, lacrymatories, or [3]
tear bottles, attended these rural urns, either as
sacred unto the *manes*, or passionate expressions
of their surviving friends. While with rich
flames, and hired tears, they solemnized their
obsequies, and in the most lamented monu-
ments made one part of their inscriptions¹.
Some find sepulchral vessels containing liquors,
which time hath incrassated into jellies. For,
besides these lacrymatories, notable lamps, with
vessels of oils, and aromatical liquors, attended
noble ossuaries; and some yet retaining a
vinosity² and spirit in them, which, if any have

What was
found in the
urns.

¹ "Cum lacrymis posuere."

² Lazius.

CHAP. III. tasted, they have far exceeded the palates of antiquity. Liquors not to be computed by years of annual magistrates, but by great conjunctions and the fatal periods of kingdoms¹. The 34 draughts of consulary date were but crude unto these, and Opimian wine² but in the must unto them.

[4] In sundry graves and sepulchres we meet with rings, coins, and chalices. Ancient frugality was so severe, that they allowed no gold to attend the corpse, but only that which served to fasten their teeth³. Whether the Opaline stone in this were burnt upon the finger of the dead, or cast into the fire by some affectionate friend, it will consist with either custom. But other incinerable substances were found so fresh, that they could feel no singe from fire. These, upon view, were judged to be wood; but, sinking in water, and tried by the fire, we found them to be bone or ivory. In their hardness and yellow colour they most resembled box, which, in old expressions, found the epithet of eternal⁴, and perhaps in such conservatories might have passed uncorrupted.

[5] That bay leaves were found green in the tomb of S. Humbert⁵, after an hundred and

¹ About five hundred years.—Plato.

² "Vinum Opimianum, annorum centum."—Petron. [*Satyr.* c. 34].

³ *XII. Tabul.* l. xi. *De Jure Sacro.* "Neve aurum addito quoi auro dentes vincti escunt, ast im cum illo sepelire urereve, se fraude esto."

⁴ Plin. l. xvi. [c. 78?] "Inter ξύλα ἀσπῆ numerat Theophrastus."

⁵ *Supra.*

fifty years, was looked upon as miraculous. CHAP. III.
 35 Remarkable it was unto old spectators, that the cypress of the temple of Diana lasted so many hundred years. The wood of the ark, and olive-rod of Aaron, were older at the captivity; but the cypress of the ark of Noah was the greatest vegetable of antiquity, if Josephus were not deceived by some fragments of it in his days: to omit the moor logs and fir trees found under-ground in many parts of England; the undated ruins of winds, floods, or earthquakes, and which in Flanders still show from what quarter they fell, as generally lying in a north-east position¹.

But though we found not these pieces to be [6] wood, according to first apprehensions, yet we missed not altogether of some woody substance; for the bones were not so clearly picked but some coals were found amongst them; a way to make wood perpetual, and a fit associate for metal, whereon was laid the foundation of the great Ephesian temple, and which were made the lasting tests of old boundaries and land-
 36 marks. Whilst we look on these, we admire not observations of coals found fresh after four hundred years². In a long-deserted habitation³ even egg-shells have been found fresh, not tending to corruption.

In the monument of King Childerick the iron [7] relicks were found all rusty and crumbling into Tomb of
 pieces; but our little iron pins, which fastened King Chil-
 derick.

¹ Gorop. Becanus in *Niloscopio*.

² Of *Beringuccio nella pyrotechnia*.

³ At Elmeham.

CHAP. III. the ivory works, held well together, and lost not their magnetical quality, though wanting a tenacious moisture for the firmer union of parts; although it be hardly drawn into fusion, yet that metal soon submitteth unto rust and dissolution. In the brazen pieces we admired not the duration, but the freedom from rust, and ill savour, upon the hardest attrition; but now exposed unto the piercing atoms of air, in the space of a few months, they begin to spot and betray their green entrails. We conceive not these urns to have descended thus naked as they appear, or to have entered their graves without the old habit of flowers. The urn of Philopœmen was so laden with flowers and ribbons, that it afforded no sight of itself. The rigid Lycurgus allowed olive and myrtle. The Athenians might fairly except against the practice of Democritus, to be buried up in honey, as fearing to embezzle a great commodity of their country, and the best of that kind in Europe. But Plato seemed too frugally politick, who allowed no larger monument than would contain four heroick verses, and designed the most barren ground for sepulture: though we cannot commend the goodness of that sepulchral ground which was set at no higher rate than the mean salary of Judas. Though the earth had confounded the ashes of these ossuaries, yet the bones were so smartly burnt, that some thin plates of brass were found half melted among them. Whereby we apprehend they were not of the meanest carcasses, perfunctorily

Ancient customs as to mementos and inscriptions.

(St. Matt. xxviii. 3-10.)

fired, as sometimes, in military, and commonly CHAP. III.
 in pestilence, burnings; or after the manner of
 abject corpses, huddled forth and carelessly
 burnt, without the Esquiline Port at Rome;
 which was an affront continued upon Tiberius,
 38 while they but half burnt his body¹, and in the
 amphitheatre, according to the custom in notable
 malefactors; whereas Nero seemed not so much
 to fear his death as that his head should be cut
 off and his body not burnt entire.

Some, finding many fragments of skulls in [8]
 these urns, suspected a mixture of bones; in As to keep-
 none we searched was there cause of such con- ing ashes
 jecture, though sometimes they declined not distinct.
 that practice.—The ashes of Domitian² were
 mingled with those of Julia; of Achilles with
 those of Patroclus. All urns contained not
 single ashes; without confused burnings they
 affectionately compounded their bones; passion-
 ately endeavouring to continue their living
 unions. And when distance of death denied
 such conjunctions, unsatisfied affections con-
 ceived some satisfaction to be neighbours in
 the grave, to lie urn by urn, and touch but in
 their names. And many were so curious to
 continue their living relations, that they con-
 trived large and family urns, wherein the ashes
 of their nearest friends and kindred might
 successively be received³, at least some parcels

¹ Sueton. *Vita Tib.* [c. lxxv]. "Et in amphitheatro
 semiustulandum," not. Casaub.

² Sueton. *Vita Domitian.* [c. xvii].

³ See the most learned and worthy Mr. M. Casaubon upon
 Antoninus.

CHAP. III. thereof, while their collateral^a memorials lay in minor vessels about them.

[9] Antiquity held too light thoughts from objects 39
 Disregard of of mortality, while some drew provocatives of
 human life mirth from anatomies¹, and jugglers showed
 among the tricks with skeletons; when fiddlers made not
 ancients, so pleasant mirth as fencers, and men could sit
 with quiet stomachs, while hanging was played
 before them². Old considerations made few
 mementos by skulls and bones upon their
 monuments. In the Egyptian obelisks and
 hieroglyphical figures it is not easy to meet
 with bones. The sepulchral lamps speak
 nothing less than sepulture, and in their literal
 draughts prove often obscene and antick pieces.
 Where we find *D. M.*³ it is obvious to meet
 with sacrificing *pateras* and vessels of libation
 upon old sepulchral monuments. In the Jewish
 Jewish Hypo- hypogæum⁴ and subterranean cell at Rome,
 gæum at Rome. was little observable beside the variety of lamps
 and frequent draughts of the holy candlestick.
 In authentick draughts of Anthony and Jerome
 we meet with thigh bones and death's-heads;
 but the cemeterial cells of ancient Christians 40
 and martyrs were filled with draughts of Scrip-
 ture stories; not declining the flourishes of
 cypress, palms, and olive, and the mystical

¹ "Sic erimus cuncti," &c. "Ergo dum vivimus vivamus."

² Ἀγχόνην παίζειν. A barbarous pastime at feasts [among the Thracians] when men stood upon a rolling globe, with their necks in a rope, and a knife in their hands, ready to cut it when the stone was rolled away; wherein if they failed, they lost their lives, to the laughter of their spectators.—Athenæus [iv. 42, p. 155].

³ "Diis manibus."

⁴ Bosio.

figures of peacocks, doves, and cocks; but iterately affecting the portraits of Enoch, Lazarus, Jonas, and the vision of Ezekiel, as hopeful draughts, and hinting imagery of the resurrection, which is the life of the grave, and sweetens our habitations in the land of moles and pismires. CHAP. III.

Gentile inscriptions precisely delivered the [10] extent of men's lives, seldom the manner of their deaths, which history itself so often leaves obscure in the records of memorable persons. There is scarce any philosopher but dies twice or thrice in Laërtius; nor almost any life without two or three deaths in Plutarch; which makes the tragical ends of noble persons more favourably resented by compassionate readers who find some relief in the election of such differences.

The certainty of death is attended with un- [11] certainties, in time, manner, places. The variety of monuments hath often obscured true graves; and cenotaphs confounded sepulchres. For beside their real tombs, many have found honorary and empty sepulchres. The variety of Homer's monuments made him of various countries. Euripides¹ had his tomb in [Attica], but his sepulture in Macedonia. And Severus² found his real sepulchre in Rome, but his empty grave in Gallia. Cenotaph of Euripides.

He that lay in a golden urn³ eminently above [12]

¹ Pausan. *in Atticis* [i. 21].

² Lamprid. *Vit. Alexand. Severi*.

³ Trajanus.—Dion. [lxix].

CHAP. III. the earth, was not like to find the quiet of his bones. Many of these urns were broke by a vulgar discoverer in hope of enclosed treasure. The ashes of Marcellus¹ were lost above ground, upon the like account. Where profit hath prompted, no age hath wanted such miners; for which the most barbarous expilators found the most civil rhetorick :—“Gold once out of the earth is no more due unto it;—what was unreasonably committed to the ground, is reasonably resumed from it;—let monuments and rich fabricks, not riches, adorn men’s ashes;—the commerce of the living is not to be transferred unto the dead;—it is not injustice to take that 42 which none complains to lose, and no man is wronged where no man is possessor.”

[13] What virtue yet sleeps in this *terra damnata* and aged cinders, were petty magic to experiment. These crumbling relicks and long fired particles superannuate such expectations; bones, hairs, nails, and teeth of the dead, were the treasures of old sorcerers. In vain we revive such practices; present superstition too visibly perpetuates the folly of our forefathers, wherein unto old observation² this island was so complete, that it might have instructed Persia.

[14] Plato’s historian of the other world lies twelve days incorrupted, while his soul was viewing the large stations of the dead. How to keep the

Preservation
of corpses.

¹ Plut. *Vita Marcelli*. The commission of the Gothish King Theodoric for finding out sepulchral treasure.—Cassiodor. *var.* l. 4.

² “Britannia hodieque eam attonite celebrat tantis ceremoniis, ut dedisse Persis videri possit.”—Plin. l. xxx. [c. 4].

corpse seven days from corruption by anointing and washing, without exenteration, were an hazardable piece of art, in our choicest practice. How they made distinct separation of bones and ashes from fiery admixture, hath found no historical solution; though they
 43 seemed to make a distinct collection, and overlooked not Pyrrhus his toe¹. Some provision they might make by fictile vessels, coverings, tiles, or flat stones, upon and about the body (and in the same field, not far from these urns, many stones were found under ground), as also by careful separation of extraneous matter, composing and raking up the burnt bones with forks, observable in that notable lamp of Galvanus². Marlianus, who had the sight of the *vas ustrinum*³ or vessel wherein they burnt the dead, found in the Esquiline field at Rome, might have afforded clearer solution. But their insatisfaction herein begat that remarkable invention in the funeral pyres of some princes, by incombustible sheets made with a texture of asbestos, incremable flax, or 'salamander's wool, which preserved their bones and ashes incom-
 mixed. Salamander's wool.

How the bulk of a man should sink into so [15] few pounds of bones and ashes, may seem strange unto any who considers not its consti-

¹ Which could not be burnt.

² To be seen in Licet. *De Reconditis Veterum Lucernis* [p. 599].

³ *Topographia Romæ* ex Marliano. "Erat et vas ustrinum appellatum, quod in eo cadavera comburerentur." Cap. *de Campo Esquilino*.

CHAP. III. tution, and how slender a mass will remain upon an open and urging fire of the carnal composition. Even bones themselves, reduced 44 into ashes, do abate a notable proportion. And consisting much of a volatile salt, when that is fired out, make a light kind of cinders. Although their bulk be disproportionable to their weight, when the heavy principle of salt is fired out, and the earth almost only remaineth; observable in saw, which makes more ashes than oak, and discovers the common fraud of selling ashes by measure, and not by ponderation.

[16] Some bones make best skeletons¹, some bodies quick and speediest ashes. Who would expect a quick flame from hydropical Heraclitus? The poisoned soldier when his belly brake, put out two pyres in Plutarch². But in the plague of Athens³, one private pyre served two or three intruders; and the Saracens burnt in large heaps, by the king of Castile⁴, showed how little fuel sufficeth. Though the funeral pyre of Patroclus took up an hundred foot⁵, a piece of an old boat burnt Pompey; and if the burthen of Isaac were sufficient for an holocaust, a man may carry his own pyre.

[17] From animals are drawn good burning lights, 45 and good medicines against burning⁶. Though the seminal humour seems of a contrary nature

¹ Old bones according to Lyserus. Those of young persons not tall nor fat according to Columbus.

² *Vita Gracc.* [c. 13].

³ Thucydides [ii. 52].

⁴ Laurent. Valla.

⁵ Ἐκατόμπεδον ἔνθα καὶ ἔνθα.—[Homer, *Il.* xxii. 164.]

⁶ *Speran. Alb. Ovor.*

Effect of fire
on various
bodies.

Plutarch,
Pomp. c. 80.

to fire, yet the body completed proves a combustible lump, wherein fire finds flame even from bones, and some fuel almost from all parts; though the metropolis of humidity¹ seems least disposed unto it, which might render the skulls of these urns less burned than other bones. But all flies or sinks before fire almost in all bodies: when the common ligament is dissolved, the attenuable parts ascend, the rest subside in coal, calx, or ashes.

CHAP. III.

The body a combustible lump.

To burn the bones of the king of Edom for [18] lime², seems no irrational ferity; but to drink of the ashes of dead relations³, a passionate prodigality. He that hath the ashes of his friend, hath an everlasting treasure; where fire taketh leave, corruption slowly enters. In bones well burnt, fire makes a wall against itself; experimented in cupels, and tests of metals, which consist of such ingredients. What the sun compoundeth, fire analyseth, not transmuteth. That devouring agent leaves almost always a morsel for the earth, whereof all things are but a colony; and which, if time permits, the mother element will have in their primitive mass again.

He that looks for urns and old sepulchral [19] relicks, must not seek them in the ruins of temples, where no religion anciently placed them. These were found in a field, according to ancient custom, in noble or private burial;

Places of burial.

¹ The brain. Hippocrates [*De Carn.* § 4. tom. i. p. 427, ed. Kühn].

² Amos ii. 1.

³ As Artemisia of her husband Mausolus.

CHAP. III.

Burying by
high-ways.

the old practice of the Canaanites, the family of Abraham, and the burying-place of Joshua, in the borders of his possessions; and also agreeable unto Roman practice to bury by highways, whereby their monuments were under eye;—memorials of themselves, and mementos of mortality unto living passengers; whom the epitaphs of great ones were fain to beg to stay and look upon them,—a language though sometimes used, not so proper in church inscriptions¹. The sensible rhetorick of the dead, to exemplarity of good life, first admitted the bones of pious men and martyrs within church walls, which in succeeding ages crept into promiscuous practice: while Constantine was peculiarly favoured to be admitted into the church porch, and the first thus buried in England, was in the days of Cuthred.

Postures
observed.

[20] Christians dispute how their bodies should lie in the grave. In urnal interment they clearly escaped this controversy. Though we decline the religious consideration, yet in cemeterial and narrower burying-places, to avoid confusion and cross-position, a certain posture were to be admitted: which even Pagan civility observed². The Persians lay north and south; the Megarians and Phœnicians placed their heads to the east; the Athenians, some think, towards the west, which Christians still retain. And Beda will have it to be the posture of our Saviour. That he was crucified with his face toward the west, we will not contend with

Phœnician
and Megarian
practice.

¹ "Siste viator."

² Kirchmannus *De Funer.*

tradition and probable account ; but we applaud CHAP. III.
not the hand of the painter, in exalting his cross
so high above those on either side : since hereof
we find no authentic account in history, and
even the crosses found by Helena, pretend no
such distinction from longitude or dimension.

48 To be gnawed out of our graves, to have our [21]
skulls made drinking-bowls, and our bones
turned into pipes, to delight and sport our
enemies, are tragical abominations escaped in
burning burials.

Urnal interments and burnt relicks lie not in [22]
fear of worms, or to be an heritage for serpents.
In carnal sepulture, corruptions seem peculiar
unto parts ; and some speak of snakes out of
the spinal marrow. But while we suppose
common worms in graves, 'tis not easy to find
any there ; few in churchyards above a foot
deep, fewer or none in churches though in fresh-
decayed bodies. Teeth, bones, and hair, give
the most lasting defiance to corruption. In an
hydropical body, ten years buried in the church-
yard, we met with a fat concretion, where the
nitre of the earth, and the salt and lixivious
liquor of the body, had coagulated large lumps
of fat into the consistence of the hardest Castile
soap, whereof part remaineth with us. After
49 a battle with the Persians, the Roman corpses
decayed in few days, while the Persian bodies
remained dry and uncorrupted. Bodies in the
same ground do not uniformly dissolve, nor
bones equally moulder ; whereof in the oppro-
brious disease, we expect no long duration.

Incorrupti-
bility of
human hair

Substance
like Castile
soap found in
an hydropi-
cal subject.

Persian and
Roman
corpses.

Durability of
the body
when buried.

CHAP. III. The body of the Marquis of Dorset seemed sound and handsomely cereclothed, that after seventy-eight years was found uncorrupted¹. Common tombs preserve not beyond powder: a firmer consistence and compage of parts might be expected from arefaction, deep burial, or charcoal. The greatest antiquities of mortal bodies may remain in putrefied bones, whereof, though we take not in the pillar of Lot's wife, or metamorphosis of Ortelius², some may be older than pyramids, in the putrefied relicks of the general inundation. When Alexander opened the tomb of Cyrus, the remaining bones discovered his proportion, whereof urnal fragments afford but a bad conjecture, and have this disadvantage of grave interments, that they leave us ignorant of most personal discoveries. For since bones afford not only rectitude and stability but figure unto the body, it is no impossible physiognomy to conjecture at fleshy appendencies, and after what shape the muscles and carnous parts might hang in their full consistencies. A full-spread *cariola*³ shows a well-shaped horse behind; handsome formed skulls give some analogy to fleshy resemblance. A critical view of bones makes a good distinction

Phrenological
conjecture.

Disquisition
on skulls.

¹ Of Thomas, Marquis of Dorset, whose body being buried 1530, was 1608, upon the cutting open of the cerecloth, found perfect and nothing corrupted, the flesh not hardened, but in colour, proportion, and softness like an ordinary corpse newly to be interred.—Burton's *Descript. of Leicestershire* [under the parish of *Bradgate*].

² In his map of Russia.

³ That part in the skeleton of an horse, which is made by the haunch-bones.

of sexes. Even colour is not beyond conjecture, CHAP. III.
 since it is hard to be deceived in the distinction
 of Negroes' skulls¹. Dante's² characters are
 to be found in skulls as well as faces. Hercules
 is not only known by his foot. Other parts
 make out their proportions and inferences
 upon whole or parts. And since the dimen-
 51 sions of the head measure the whole body, and
 the figure thereof gives conjecture of the prin-
 cipal faculties, physiognomy outlives ourselves,
 and ends not in our graves.

Severe contemplators, observing these lasting [23]
 relicks, may think them good monuments of
 persons past, little advantage to future beings;
 and, considering that power which subdueth all
 things unto itself, that can resume the scattered
 atoms, or identify out of any thing, conceive it
 superfluous to expect a resurrection out of
 relicks: but the soul subsisting, other matter,
 clothed with due accidents, may salve the in-
 dividuality. Yet the saints, we observe, arose
 from graves and monuments about the holy
 city. Some think the ancient patriarchs so
 earnestly desired to lay their bones in Canaan,
 as hoping to make a part of that resurrection;

Tombs of the
Patriarchs.

¹ For their extraordinary thickness.

² The poet Dante, in his view of Purgatory, found gluttons
 so meagre, and extenuated, that he conceited them to have
 been in the siege of Jerusalem, and that it was easy to have
 discovered *Homo* or *Omo* in their faces: M being made by the
 two lines of their cheeks, arching over the eye-brows to the
 nose, and their sunk eyes making O O which makes up *Omo*.

"Parèn l'occhiaje anella senza gemme:

Chi nel viso degli uomini legge OMO,

Bene avria quivi conosciuto l'emme."—

[*Purgat.* xxiii. 31.]

CHAP. III. and, though thirty miles from Mount Calvary, at least to lie in that region which should produce the first fruits of the dead. And if, according to learned conjecture, the bodies of men shall rise where their greatest relicks remain, many are not like to err in the topography of their resurrection, though their bones or 52 bodies be after translated by angels into the field of Ezekiel's vision, or as some will order it, into the valley of judgment, or Jehosaphat¹.

¹ Tirin, in Ezek.

CHAPTER IV.

53 CHRISTIANS have handsomely glossed the [1]
 deformity of death by careful considera- Ancient
 tion of the body, and civil rites which take off belief in the
 brutal terminations: and though they conceived Resurrec-
 all reparable by a resurrection, cast not off all *Can the soul
 rise again
 by rising*
 care of interment. And since the ashes of
 sacrifices burnt upon the altar of God were
 carefully carried out by the priests, and deposed
 in a clean field; since they acknowledged their
 bodies to be the lodging of Christ, and temples
 of the Holy Ghost, they devolved not all upon
 the sufficiency of soul-existence; and therefore
 with long services and full solemnities, concluded *passed
 ceremonial
 moral rites*
 their last exequies, wherein to all distinctions
 the Greek devotion seems most pathetically
 ceremonious¹.

Christian invention hath chiefly driven at rites, [2]
 54 which speak hopes of another life, and hints of Variety of
 a resurrection. And if the ancient Gentiles held funeral rites.
 not the immortality of their better part, and some Immortality
 subsistence after death, in several rites, customs, of the soul.

¹ *Rituale Græcorum*, opera J. Goar, in "Officio Exequiarum."

CHAP. IV. actions, and expressions, they contradicted their own opinions: wherein Democritus went high, even to the thought of a resurrection, as scoffingly recorded by Pliny¹. What can be more express than the expression of Phocylides?² Or who would expect from Lucretius³ a sentence of Ecclesiastes? Before Plato could speak, the soul had wings in Homer, which fell not, but flew out of the body into the mansions of the dead; who also observed that handsome distinction of Demas and Soma, for the body conjoined to the soul, and body separated from it. Lucian spoke much truth in jest, when he said that part of Hercules which proceeded from Alcmena perished, that from Jupiter remained immortal. Thus Socrates⁴ was content that his friends should bury his body, so they would not think they buried Socrates; and, regarding only⁵⁵ his immortal part, was indifferent to be burnt or buried. From such considerations, Diogenes might contemn sepulture, and, being satisfied that the soul could not perish, grow careless of corporal interment. The Stoicks, who thought the souls of wise men had their habitation about the moon, might make slight account of subterraneous deposition; whereas the Pythagoreans and transcorporating philosophers, who were to

¹ "Similis . . . reviviscendi promissa a Democrito vanitas, qui non revixit ipse. Quæ (malum) ista dementia est, iterari vitam morte?"—Plin. l. vii. c. 55 (56).

² Καὶ τάχα δ' ἐκ γαίης ἐλπίζομεν εἰς φάος ἐλθεῖν
Λείψαν' ἀποιχομένων, *et deinceps*.

[v. 104 in Bergk's *Anthol. Lyrica*.]

³ "Cedit enim retro de terra quod fuit ante
In terras," &c.—Lucret. [ii. 998; Eccles. xii. 7].

⁴ Plato in *Phæd.* [c. 64, p. 115 Cl.]

be often buried, held great care of their interment. And the Platonicks rejected not a due care of the grave, though they put their ashes to unreasonable expectations, in their tedious term of return and long set revolution.

Men have lost their reason in nothing so much as their religion, wherein stones and clouts make martyrs; and, since the religion of one seems madness unto another, to afford an account or rational of old rites requires no rigid reader. That they kindled the pyre aversely, or turning their face from it, was an handsome symbol of unwilling ministration. That they washed their bones with wine and milk; that the mother wrapped them in linen, and dried them in her bosom, the first fostering part and place of their nourishment; that they opened their eyes towards heaven before they kindled the fire, as the place of their hopes or original, were no improper ceremonies. Their last valediction¹, thrice uttered by the attendants, was also very solemn, and somewhat answered by Christians, who thought it too little, if they threw not the earth thrice upon the interred body. That, in strewing their tombs, the Romans affected the rose; the Greeks amaranthus and myrtle: that the funeral pyre consisted of sweet fuel, cypress, fir, larix, yew, and trees perpetually verdant, lay silent expressions of their surviving hopes. Wherein Christians, who deck their coffins with bays, have found a more elegant emblem; for that tree, seeming dead, will restore

[3]

Force of superstition.

Funeral flowers and plants.

¹ "Vale, vale, nos te ordine quo natura permittet sequamur."

CHAP. IV. itself from the root, and its dry and exsuccous leaves resume their verdure again; which, if we mistake not, we have also observed in furze. Whether the planting of yew in churchyards hold not its original from ancient funeral rites, 57 or as an emblem of resurrection, from its perpetual verdure, may also admit conjecture.

[4] They made use of musick to excite or quiet the affections of their friends, according to different harmonies. But the secret and symbolical hint was the harmonical nature of the soul; which, delivered from the body, went again to enjoy the primitive harmony of heaven, from whence it first descended; which, according to its progress traced by antiquity, came down by Cancer, and ascended by Capricornus.

[5] They burnt not children before their teeth appeared, as apprehending their bodies too tender a morsel for fire, and that their gristly bones would scarce leave separable relicks after the pyral combustion. That they kindled not fire in their houses for some days after was a strict memorial of the late afflicting fire. And mourning without hope, they had an happy fraud against excessive lamentation, by a common opinion that deep sorrows disturb their ghosts¹.

Funerals of
infants.
(Pliny, *Hist.*
Nat. vii. 15.)

[6] That they buried their dead on their backs, 58 or in a supine position, seems agreeable unto profound sleep, and common posture of dying; contrary to the most natural way of birth; nor unlike our pendulous posture, in the doubtful state of the womb. Diogenes was singular, who

¹ "Tu manes ne læde meos."

preferred a prone situation in the grave ; and CHAP. IV.
some Christians¹ like neither, who decline the
figure of rest, and make choice of an erect posture.

That they carried them out of the world with [7]
their feet forward, not inconsonant unto reason,
as contrary unto the native posture of man,
and his production first into it ; and also agree-
able unto their opinions, while they bid adieu
unto the world, not to look again upon it ;
whereas Mahometans who think to return to a
delightful life again, are carried forth with their
heads forward, and looking toward their houses.

They closed their eyes, as parts which first [8]
die, or first discover the sad effects of death. Closing of
But their iterated clamations to excitate their the eyes.
59 dying or dead friends, or revoke them unto life
again, was a vanity of affection ; as not pre-
sumably ignorant of the critical tests of death,
by apposition of feathers, glasses, and reflec-
tion of figures, which dead eyes represent not :
which, however not strictly verifiable in fresh
and warm cadavers, could hardly elude the test,
in corpses of four or five days².

That they sucked in the last breath of their [9]
expiring friends, was surely a practice of no
medical institution, but a loose opinion that the
soul passed out that way, and a fondness of
affection, from some Pythagorical foundation³,
that the spirit of one body passed into another,
which they wished might be their own.

¹ Russians, &c.

² At least by some difference from living eyes.

³ Francesco Perucci, *Pompe funebri*.

CHAP. IV. That they poured oil upon the pyre, was
 [10] a tolerable practice, while the intention rested
 in facilitating the accension. But to place good
 omens in the quick and speedy burning, to
 sacrifice unto the winds for a dispatch in this
 office, was a low form of superstition.

Funeral
jesters.

[11] The archimime; or jester, attending the funeral
 train, and imitating the speeches, gesture, and
 manners of the deceased, was too light for such 60
 solemnities, contradicting their funeral orations,
 and doleful rites of the grave.

[12] That they buried a piece of money with them
 as a fee of the Elysian ferryman, was a practice
 full of folly. But the ancient custom of placing
 coins in considerable urns, and the present prac-
 tice of burying medals in the noble foundations
 of Europe, are laudable ways of historical dis-
 coveries, in actions, persons, chronologies; and
posterity will applaud them.

Funerals of
self-killers.

[13] We examine not the old laws of sepulture,
 exempting certain persons from burial or
 burning. But hereby we apprehend that these
 were not the bones of persons planet-struck or
 burnt with fire from heaven; no relicks of
 traitors to their country, self-killers, or sacri-
 legious malefactors; persons in old apprehen-
 sion unworthy of the earth; condemned unto
 the Tartarus of hell, and bottomless pit of Plato,
 from whence there was no redemption.

[14] Nor were only many customs questionable
 in order to their obsequies, but also sundry 61
 practices, fictions, and conceptions, discordant
 or obscure, of their state and future beings.

Whether unto eight or ten bodies of men to add CHAP. IV.
one of a woman, as being more inflammable,
and unctuously constituted for the better pyral
combustion, were any rational practice; or
whether the complaint of Periander's wife be
tolerable, that wanting her funeral burning, she
suffered intolerable cold in hell, according to
the constitution of the infernal house of Plato,
wherein cold makes a great part of their tortures,
it cannot pass without some question.

Why the female ghosts appear unto Ulysses, [15]
before the heroes and masculine spirits,—why
the Psyche or soul of Tiresias is of the mascu-
line gender¹, who, being blind on earth, sees
more than all the rest in hell; why the funeral
suppers consisted of eggs, beans, smallage, and
lettuce, since the dead are made to eat aspho-
dels² about the Elysian meadows,—why, since
there is no sacrifice acceptable, nor any pro-
pitiation for the covenant of the grave, men set
62 up the deity of Morta, and fruitlessly adored
divinities without ears, it cannot escape some
doubt.

The dead seem all alive in the human Hades [16]
of Homer, yet cannot well speak, prophesy, or Hades of
Homer.
know the living, except they drink blood, where-
in is the life of man. And therefore the souls
of Penelope's paramours, conducted by Mercury,
chirped like bats, and those which followed
Hercules, made a noise but like a flock of birds.

¹ In Homer [*Od.* xi. 90]:

Ψυχὴ Θηβαίου Τειρεσίου
—σκήπτρον ἔχων.

² In Lucian [*Cataplus* § 2].

CHAP. IV. The departed spirits know things past and
 [17] to come; yet are ignorant of things present. Agamemnon foretells what should happen unto Ulysses; yet ignorantly enquires what is become of his own son. The ghosts are afraid of swords in Homer; yet Sibylla tells Æneas in Virgil, the thin habit of spirits was beyond the force of weapons. The spirits put off their malice with their bodies, and Cæsar and Pompey accord in Latin hell; yet Ajax, in Homer, endures not a conference with Ulysses: and Deiphobus appears all mangled in Virgil's ghosts, yet we meet with perfect shadows among the wounded ghosts of Homer.

[18] Since Charon in Lucian applauds his condition 63 among the dead, whether it be handsomely said of Achilles, that living contemner of death, that he had rather be a ploughman's servant, than emperor of the dead? How Hercules his soul is in hell, and yet in heaven; and Julius his soul in a star, yet seen by Æneas in hell?—
 (Horace, *Od.* i. 12. 47.) except the ghosts were but images and shadows of the soul, received in higher mansions, according to the ancient division of body, soul, and image, or *simulacrum* of them both. The particulars of future beings must needs be dark unto ancient theories, which Christian philosophy yet determines but in a cloud of opinions. A dialogue between two infants in the womb concerning the state of this world, might handsomely illustrate our ignorance of the next, whereof methinks we yet discourse in Plato's den, and are but embryon philosophers.

Pythagoras escapes in the fabulous Hell of CHAP. IV.
 Dante¹, among that swarm of philosophers, [19]
 wherein whilst we meet with Plato and Socrates,
 Cato is to be found in no lower place than
purgatory. Among all the set, Epicurus is
 64 most considerable, whom men make honest
 without an Elysium, who contemned life with-
 out encouragement of immortality, and making
 nothing after death, yet made nothing of the
 king of terrors.

Were the happiness of the next world as [20]
 closely apprehended as the felicities of this, it
 were a martyrdom to live; and unto such as Reflections
 consider none hereafter, it must be more than on death and
 death to die, which makes us amazed at those immortality.
 audacities that durst be nothing and return into
 their chaos again. Certainly such spirits as
 could condemn death, when they expected no
 better being after, would have scorned to live,
 had they known any. And therefore we applaud
 not the judgment of Machiavel, that Christianity
 makes men cowards, or that with the confi-
 dence of but half-dying, the despised virtues of
 64 patience and humility have abased the spirits
 of men, which Pagan principles exalted; but
 rather regulated the wildness of audacities, in
 the attempts, grounds, and eternal sequels of
 death; wherein men of the boldest spirits are
 often prodigiously temerarious. Nor can we
 65 extenuate the valour of ancient martyrs, who
 contemned death in the uncomfortable scene of

¹ *Del Inferno*, cant. 4.

CHAP. IV. their lives, and in their decrepit martyrdoms did probably lose not many months of their days, or parted with life when it was scarce worth the living. For (beside that long time past holds no consideration unto a slender time to come) they had no small disadvantage from the constitution of old age, which naturally makes men fearful; complexionally superannuated from the bold and courageous thoughts of youth and fervent years. But the contempt of death from corporal animosity, promoteth not our felicity. They may sit in the orchestra, and noblest seats of heaven, who have held up shaking hands in the fire, and humanly contended for glory.

[21] Meanwhile Epicurus lies deep in Dante's Hell, wherein we meet with tombs enclosing souls which denied their immortalities. But whether the virtuous heathen, who lived better than he spake, or erring in the principles of himself, yet lived above philosophers of more specious maxims, lie so deep as he is placed, at least so low as not to rise against Christians, who believing or knowing that truth, have lastingly denied it in their practice and conversation — were a query too sad to insist on.

✓ [22] But all or most apprehensions rested in opinions of some future being, which, ignorantly or coldly believed, begat those perverted conceptions, ceremonies, sayings, which Christians pity or laugh at. Happy are they which live not in that disadvantage of time, when men could say little for futurity, but from reason :

whereby the noblest minds fell often upon doubtful deaths, and melancholy dissolutions. With these hopes, Socrates warmed his doubtful spirits against that cold potion; and Cato, before he durst give the fatal stroke, spent part of the night in reading the Immortality of Plato, thereby confirming his wavering hand unto the animosity of that attempt.

- 67 It is the heaviest stone that melancholy can [23] throw at a man, to tell him he is at the end of his nature; or that there is no further state to come, unto which this seems progressional, and otherwise made in vain. Without this accomplishment, the natural expectation and desire of such a state, were but a fallacy in nature; unsatisfied considerators would quarrel the justice of their constitutions, and rest content that Adam had fallen lower; whereby, by knowing no other original, and deeper ignorance of themselves, they might have enjoyed the happiness of inferior creatures, who in tranquillity possess their constitutions, as having not the apprehension to deplore their own natures, and, being framed below the circumference of these hopes, or cognition of better being, the wisdom of God hath necessitated their contentment: but the superior ingredient and obscured part of ourselves, whereto all present felicities afford no resting
- 68 contentment, will be able at last to tell us, we are more than our present selves, and evacuate such hopes in the fruition of their own accomplishments.

Dread of annihilation.

CHAPTER V.

[1] **N**OW since these dead bones have already 69
Duration of bones. out-lasting the living ones of Methuselah, and in a yard under ground, and thin walls of clay, out-worn all the strong and specious buildings above it, and quietly rested under the drums and trappings of three conquests: what prince can promise such diuturnity unto his relicks, or might not gladly say,

"Sic ego componi versus in ossa velim?¹"

Time, which antiquates antiquities, and hath an art to make dust of all things, hath yet spared these minor monuments.

[2] **I**n vain we hope to be known by open and 70
Reflections on the universal desire felt to be remembered after our death. visible conservatories, when to be unknown was the means of their continuation, and obscurity their protection. If they died by violent hands, and were thrust into their urns, these bones become considerable, and some old philosophers would honour them², whose souls they 70

¹ Tibullus [iii. 2. 26].

² Oracula Chaldaica cum scholiis Pselli et Plethonis. Βίη
 ληπόντων σώμα ψυχὰι καθαρώταται. "Vi corpus relinquentium
 animæ purissimæ."

conceived most pure, which were thus snatched from their bodies, and to retain a stronger propension unto them; whereas they weariedly left a languishing corpse, and with faint desires of re-union. If they fell by long and aged decay, yet wrapt up in the bundle of time, they fall into indistinction, and make but one blot with infants. (If we begin to die when we live, and long life be but a prolongation of death, our life is a sad composition; we live with death, and die not in a moment.) How many pulses made up the life of Methuselah, were work for Archimedes: common counters sum up the life of Moses his man¹. Our days become considerable, like petty sums, by minute accumulations; where numerous fractions make up but small round numbers; and our days of a span long, make not one little finger².

Pulses of
Methuselah.

If the nearness of our last necessity brought [3] a nearer conformity into it, there were a happiness in hoary hairs, and no calamity in half-senses. But the long habit of living indisposeth us for dying, when avarice makes us the sport of death, when even David grew politickly cruel, and Solomon could hardly be said to be the wisest of men. But many are too early old, and before the date of age. (Adversity stretcheth our days, misery makes Alcmena's nights³, and time hath no wings unto it.) But the most

¹ In the Psalm of Moses [xc. 10].

² According to the ancient arithmetick of the hand, wherein the little finger of the right hand contracted, signified an hundred.—Pierius in *Hieroglyph*.

³ One night as long as three.

CHAP. V. tedious being is that which can unwish itself, content to be nothing, or never to have been, which was beyond the malcontent of Job, who cursed not the day of his life, but his nativity; content to have so far been, as to have a title to future being, although he had lived here but in an hidden state of life, and as it were an abortion.

[4] What song the Syrens sang, or what name Achilles assumed when he hid himself among women, though puzzling questions¹, are not beyond all conjecture. What time the persons of these ossuaries entered the famous nations of the dead², and slept with princes and counselors, might admit a wide solution. But who were the proprietaries of these bones, or what bodies these ashes made up, were a question 72 above antiquarism; not to be resolved by man, nor easily perhaps by spirits, except we consult the provincial guardians, or tutelary observators. Had they made as good provision for their names, as they have done for their relicks, they had not so grossly erred in the art of perpetuation. But to subsist in bones, and be but pyramidally extant, is a fallacy in duration. Vain ashes which in the oblivion of names, persons, times, and sexes, have found unto themselves a fruitless continuation, and only arise unto late posterity, as emblems of mortal vanities, antidotes against pride, vain-glory,

Song of the
Syrens.—
Homer.

Vanity of
tombs.

¹ The puzzling questions of Tiberius unto grammarians.—
Marcel. Donatus in Suet. [*Tiberius* lxx.]

² Κλυστὰ ἔθνεα νεκρῶν.—Hom. [*Od.* x. 526]; Job [iii. 13. &c.]

and madding vices. Pagan vain-glories which thought the world might last for ever, had encouragement for ambition ; and, finding no Atropos unto the immortality of their names, were never damp't with the necessity of oblivion. Even old ambitions had the advantage of ours, in the attempts of their vain-glories, who acting early, and before the probable meridian of time, have by this time found great accomplishment of their designs, whereby the ancient heroes have already out-last'd their monuments and mechanical preservations. But in this latter scene of time, we cannot expect such mummies unto our memories, when ambition may fear the prophecy of Elias¹, and Charles the Fifth can never hope to live within two Methuselahs of Hector².

And therefore, restless unquiet for the diuturnity of our memories unto present considerations seems a vanity almost out of date, and superannuated piece of folly. We cannot hope to live so long in our names, as some have done in their persons. One face of Janus holds no proportion unto the other. 'Tis too late to be ambitious. The great mutations of the world are acted, or time may be too short for our designs. To extend our memories by monuments, whose death we daily pray for, and whose duration we cannot hope, without injury to our expectations in the advent of the last day,

¹ That the world may last but six thousand years.

² Hector's fame lasting above two lives of Methuselah, before that famous prince was extant.

CHAP. V. were a contradiction to our beliefs. We whose generations are ordained in this setting part of time, are providentially taken off from such 74 imaginations; and, being necessitated to eye the remaining particle of futurity, are naturally constituted unto thoughts of the next world, and cannot excusably decline the consideration of that duration, which maketh pyramids pillars of snow, and all that's past a moment.

[6] Circles and right lines limit and close all bodies, and the mortal right-lined circle¹ must conclude and shut up all. (There is no antidote against the opium of time, which temporally considereth all things; our fathers find their graves in our short memories, and sadly tell us how we may be buried in our survivors. Grave-stones tell truth scarce forty years². Generations pass while some trees stand, and old families last not three oaks. To be read by bare inscriptions like many in Gruter³, to hope for eternity by enigmatical epithets or first letters of our names, to be studied by antiquaries, who we were, and have new names given us like many of the mummies⁴, are cold consolations 75 unto the students of perpetuity, even by everlasting languages.

[7] To be content that times to come should only know there was such a man, not caring

¹ © The character of death. [Mart. *Ep.* vii. 37.]

² Old ones being taken up, and other bodies laid under them.

³ Gruteri *Inscriptiones Antiquæ*.

⁴ Which men show in several countries, giving them what names they please; and unto some the names of the old Egyptian kings, out of Herodotus.

whether they knew more of him, was a frigid CHAP. V.
ambition in Cardan¹; disparaging his horo-
scopical inclination and judgment of himself.
Who cares to subsist like Hippocrates' patients,
or Achilles' horses in Homer, under naked (//. xvi. 149.
nominations, without deserts and noble acts,
which are the balsam of our memories, the
entelechia and soul of our subsistences? To be
nameless in worthy deeds, exceeds an infamous
history. The Canaanitish woman lives more
happily without a name, than Herodias with
one. And who had not rather been the good
thief than Pilate?

But the iniquity of oblivion blindly scattereth [8]
her poppy, and deals with the memory of men
without distinction to merit of perpetuity. Who
can but pity the founder of the pyramids?
Herostratus lives that burnt the temple of
76 Diana, he is almost lost that built it. Time
hath spared the epitaph of Adrian's horse, con-
founded that of himself. In vain we compute
our felicities by the advantage of our good
names, since bad have equal durations, and
Thersites is like to live as long as Agamemnon.
Who knows whether the best of men be known,
or whether there be not more remarkable persons
forgot, than any that stand remembered in the
known account of time? Without the favour
of the everlasting register, the first man had
been as unknown as the last, and Methuselah's
long life had been his only chronicle.

¹ "Cuperem notum esse quod sim, non opto ut sciatur qualis
sim."—(Card. *in Vita Propria*.)

CHAP. V. Oblivion is not to be hired. The greater
 [9] part must be content to be as though they had not been, to be found in the register of God, not in the record of man. Twenty-seven names make up the first story¹, and the recorded names ever since contain not one living century. The number of the dead long exceedeth all that shall live. The night of time far surpasseth the day, and who knows when was the equinox? Every hour adds unto that current arithmetick, which scarce stands one moment. And since death must be the *Lucina* of life, and even 77 Pagans² could doubt, whether thus to live were to die; since our longest sun sets at right descensions, and makes but winter arches, and therefore it cannot be long before we lie down in darkness, and have our light in ashes³; since the brother of death daily haunts us with dying mementos, and time that grows old in itself, bids us hope no long duration;—diuturnity is a dream and folly of expectation.

Effect of
 sorrow.
 Oblivion
 shares with
 memory a
 great part
 even of our
 living being.

[10] Darkness and light divide the course of time, and oblivion shares with memory a great part even of our living beings; we slightly remember our felicities, and the smartest strokes of affliction leave but short smart upon us. Sense endureth no extremities, and sorrows destroy us or themselves. To weep into stones are fables. Afflictions induce callosities; miseries are slippery, or fall like snow upon us, which

¹ Before the flood.

² Euripides.

³ According to the custom of the Jews, who place a lighted wax-candle in a pot of ashes by the corpse.—Leo.

notwithstanding is no unhappy stupidity. To be ignorant of evils to come, and forgetful of evils past, is a merciful provision in nature, whereby we digest the mixture of our few and evil days, and, our delivered senses not relapsing into cutting remembrances, our sorrows are not kept raw by the edge of repetitions. A great part of antiquity contented their hopes of subsistency with a transmigration of their souls,—a good way to continue their memories, while having the advantage of plural successions, they could not but act something remarkable in such variety of beings, and enjoying the fame of their passed selves, make accumulation of glory unto their last durations. Others, rather than be lost in the uncomfortable night of nothing, were content to recede into the common being, and make one particle of the public soul of all things, which was no more than to return into their unknown and divine original again. Egyptian ingenuity was more unsatisfied, contriving their bodies in sweet consistencies, to attend the return of their souls. But all was vanity¹, feeding the wind, and folly. The Egyptian mummies, which Cambyzes or time hath spared, avarice now consumeth. Mummy is become merchandise, Mizraim cures wounds, and Pharaoh is sold for balsams.

In vain do individuals hope for immortality, or any patent from oblivion, in preservations below the moon; men have been deceived even

[11]

No immor-
tality
beneath the
moon.

¹ "Omnia vanitas et pastio venti, νομὴ ἀνέμου καὶ βόσκησις," ut olim Aquila et Symmachus. v. Drus., Eccles. [i. 14].

CHAP. V. in their flatteries above the sun, and studied conceits to perpetuate their names in heaven. The various cosmography of that part hath already varied the names of contrived constellations; Nimrod is lost in Orion, and Osyris in the Dog-star. While we look for incorruption in the heavens, we find they are but like the earth;—durable in their main bodies, alterable in their parts; whereof, beside comets and new stars, perspectives begin to tell tales, and the spots that wander about the sun, with Phaeton's favour, would make clear conviction.

[12] Nothing immortal but immortality. (There is nothing strictly immortal, but immortality. Whatever hath no beginning, may be confident of no end (all others have a dependent being and within the reach of destruction); which is the peculiar of that necessary Essence that cannot destroy itself; and the highest strain of omnipotency, to be so power- 80 fully constituted as not to suffer even from the power of itself.) But the sufficiency of Christian immortality frustrates all earthly glory, and the quality of either state after death, makes a folly of posthumous memory. God who can only destroy our souls, and hath assured our resurrection, either of our bodies or names hath directly promised no duration. Wherein there is so much of chance, that the boldest expectants have found unhappy frustration; and to hold long subsistence, seems but a scape in oblivion. But man is a noble animal, splendid in ashes, and pompous in the grave, solemnizing nativities and deaths with equal lustre, nor omitting

ceremonies of bravery in the infamy of his nature. CHAP. V.

(Life is a pure flame, and we live by an in- [13]
visible sun within us. A small fire sufficeth for
life, great flames seemed too little after death)
while men vainly affected precious pyres, and to
burn like Sardanapalus; but the wisdom of
81 funeral laws found the folly of prodigal blazes,
and reduced undoing fires unto the rule of sober
obsequies, wherein few could be so mean as not
to provide wood, pitch, a mourner, and an urn¹.

Five languages secured not the epitaph of [14]
Gordianus². The man of God lives longer
without a tomb, than any by one, invisibly in-
terred by angels, and adjudged to obscurity,
though not without some marks directing human
discovery. Enoch and Elias, without either
tomb or burial, in an anomalous state of being,
are the great examples of perpetuity, in their
long and living memory, in strict account being
still on this side death, and having a late part
yet to act upon this stage of earth. If in the
decretory term of the world, we shall not all die
but be changed, according to received transla-
tion, the last day will make but few graves; at
least quick resurrections will anticipate lasting

Vanity of
Epitaphs.

¹ According to the epitaph of Rufus and Beronica, in Gruterus,

"Nec ex
Eorum bonis plus inventum est, quam
Quod sufficeret ad emendam pyram,
Et picem quibus corpora cremarentur,
Et præfica conductæ, et olla emptæ."

² In Greek, Latin, Hebrew, Egyptian, Arabic, defaced by Licinius the emperor.

CHAP. V. sepultures. Some graves will be opened before they be quite closed, and Lazarus be no wonder. When many that feared to die, shall groan that they can die but once, (the dismal state is the 82 second and living death, when life puts despair on the damned;) when men shall wish the coverings of mountains, not of monuments, and annihilations shall be courted.

[15] While some have studied monuments, others have studiously declined them, and some have been so vainly boisterous, that they durst not acknowledge their graves; wherein Alaricus¹ seems most subtle, who had a river turned to hide his bones at the bottom. Even Sylla, that thought himself safe in his urn, could not prevent revenging tongues, and stones thrown at his monument. (Happy are they whom privacy makes innocent, who deal so with men in this world, that they are not afraid to meet them in the next; who, when they die, make no commotion among the dead, and are not touched with that poetical taunt of Isaiah².)

[16] Pyramids, arches, obelisks, were but the irregularities of vain-glory, and wild enormities of ancient magnanimity. (But the most magnanimous resolution rests in the Christian religion, 83 which trampleth upon pride, and sits on the neck of ambition, humbly pursuing that infallible perpetuity, unto which all others must diminish their diameters, and be poorly seen in angles of contingency³.)

¹ Jornandes *de rebus Geticis*.

² Isa. xiv. 16, &c.

³ *Angulus contingentia*, the least of angles.

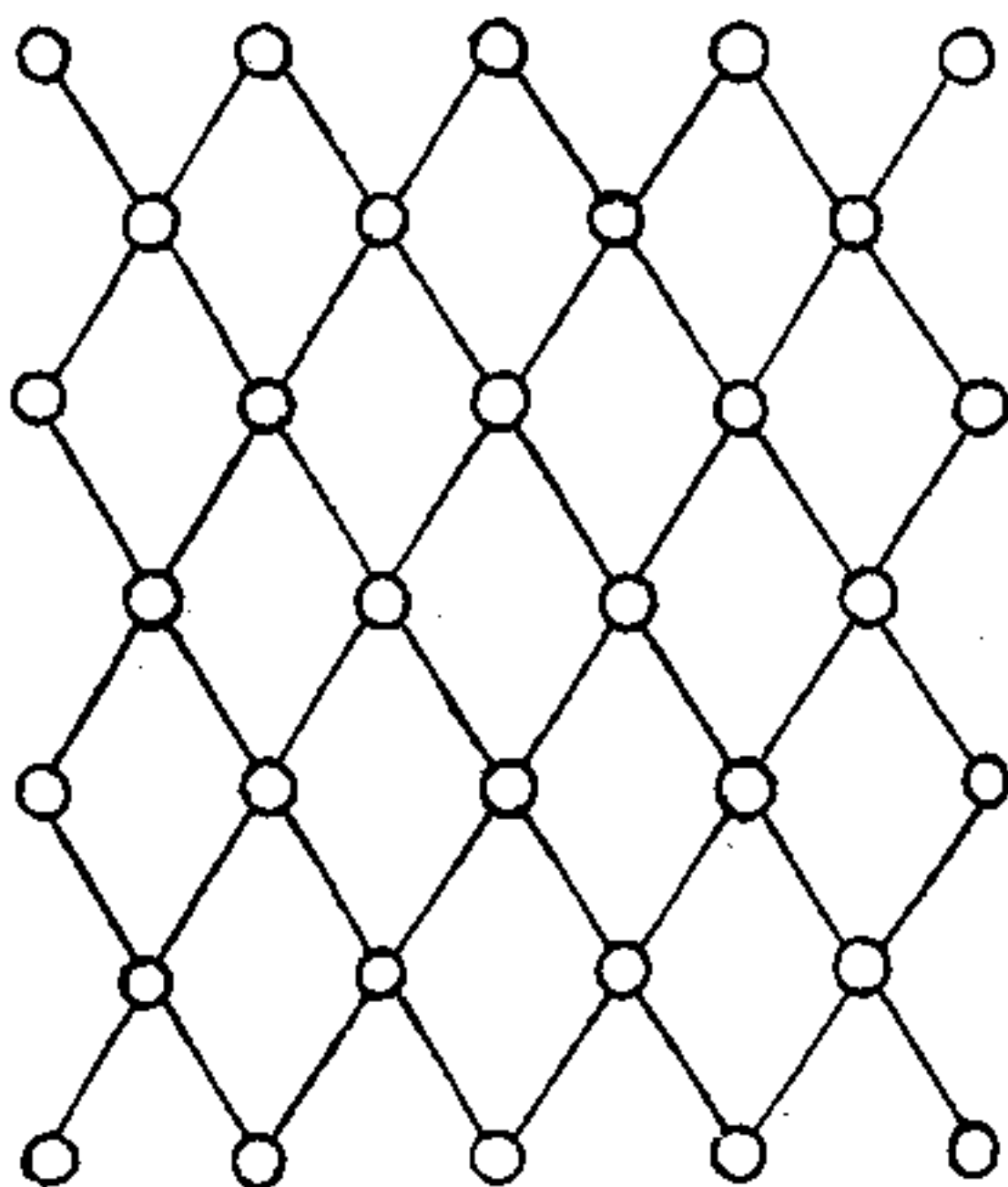
Pious spirits who passed their days in raptures of futurity, made little more of this world, than [17] the world that was before it, while they lay obscure in the chaos of pre-ordination, and night of their fore-beings. And if any have been so happy as truly to understand Christian annihilation, ecstacies, exolution, liquefaction, transformation, the kiss of the spouse, gustation of God, and ingression into the divine shadow, they have already had an handsome anticipation of heaven; the glory of the world is surely over, and the earth in ashes unto them.

To subsist in lasting monuments, to live in [18] their productions, to exist in their names and predicament of chimæras, was large satisfaction unto old expectations, and made one part of their Elysiums. But all this is nothing in the 84 metaphysicks of true belief. To live indeed, is to be again ourselves, which being not only an hope, but an evidence in noble believers, 'tis all one to lie in St. Innocents'¹ church-yard, as in the sands of Egypt. Ready to be any thing, in the ecstasy of being ever, and as content with six foot as the *moles* of Adrianus².

"—tabesne cadavera solvat,
An rogas, haud refert."—Lucan [*Phars.* vii. 809].

¹ In Paris, where bodies soon consume.

² A stately mausoleum or sepulchral pile, built by Adrianus in Rome, where now standeth the castle of St. Angelo.



Quid [illo] Quincunce speciosius, qui, in
quamcunque partem spectaveris,
rectus est.--QUINTILIAN [8. 3. 9].

THE
G A R D E N
OF
C Y R U S.

OR,
The Quincunciall, Lozenge,
or Net-work Plantations
of the Ancients, Artificially
Naturally, Mystically
Considered.

BY
Thomas Brown D. of Physick

Printed in the Year, 1658.

1st Edition, 1658.

p. ix

TO MY

WORTHY AND HONoured FRIEND,

NICHOLAS BACON,

OF GILLINGHAM, ESQUIRE.

HAD I not observed that purblind¹ men [1]
have discoursed well of sight, and some The Epistle
without issue², excellently of generation; I, that Dedicatory,
was never master of any considerable garden,
had not attempted this subject. But the earth
is the garden of nature, and each fruitful country
a paradise. Dioscorides made most of his
observations in his march about with Antonius;
and Theophrastus raised his generalities chiefly
from the field.

Beside, we write no herbal, nor can this volume [2]
deceive you, who have handled the massiest³
thereof: who know that three folios⁴ are yet
too little, and how new herbals fly from America
x upon us: from persevering enquirers, and old⁵ in
those singularities, we expect such descriptions;

¹ Plempius, Cabeus, &c.

² Dr. Harvey.

³ Besleri, *Hortus Eystetensis*.

⁴ Baubini, *Theatrum Botanicum*, &c.

⁵ My worthy friend Mr. Goodier, an ancient and learned
botanist.

The Epistle
Dedicatory.

wherein England¹ is now so exact, that it yields not to other countries.

[3] Envy will
have nothing
new.

We pretend not to multiply vegetable divisions by quincuncial and reticulate plants; or erect a new phytology. The field of knowledge hath been so traced, it is hard to spring any thing new. Of old things we write something new, if truth may receive addition, or envy will have any thing new; since the ancients knew the late anatomical discoveries, and Hippocrates the circulation.

[4] You have been so long out of trite learning, that 'tis hard to find a subject proper for you; and if you have met with a sheet upon this, we have missed our intention. In this multiplicity of writing, by and barren themes are best fitted for invention; subjects so often discoursed confine the imagination, and fix our conceptions unto the notions of forewriters. Beside, such discourses allow excursions, and venially admit of collateral truths, though at some distance from their principals. Wherein if we sometimes take wide liberty, we are not single, but err by great example².

[5] He that will illustrate the excellency of this xi order, may easily fail upon so spruce a subject, wherein we have not affrighted the common reader with any other diagrams, than of itself; and have industriously declined illustrations from rare and unknown plants.

¹ As in London and divers parts, whereof we mention none, lest we seem to omit any.

² Hippocrates *de Superfætatione, de Dentitione*.

Your discerning judgment, so well acquainted [6]
 with that study, will expect herein no mathe-
 matical truths, as well understanding how few
 generalities and *U finitas*¹ there are in nature; The Epistle
Dedicatory.
Few gene-
ralities in
nature.
 how Scaliger hath found exceptions in most
 universals of Aristotle and Theophrastus; how
 botanical maxims must have fair allowance, and
 are tolerably current, if not intolerably over-
 balanced by exceptions.

You have wisely ordered your vegetable [7]
 delights, beyond the reach of exception. The
 Turks who passed their days in gardens here, The Turks
will have
gardens
hereafter.
 will have also gardens hereafter, and delighting
 in flowers on earth, must have lilies and roses
 in heaven. In garden delights 'tis not easy to
 hold a mediocrity; that insinuating pleasure is
 seldom without some extremity. The ancients
 venially delighted in flourishing gardens; many
 were florists that knew not the true use of a
 flower; and in Pliny's days none had directly
 xii treated of that subject. Some commendably
 affected plantations of venomous vegetables,
 some confined their delights unto single plants,
 and Cato seemed to dote upon cabbage; while
 the ingenuous delight of tulipists, stands saluted
 with hard language, even by their own pro-
 fessors².

That in this garden discourse, we range into [8]
 extraneous things, and many parts of art and
 nature, we follow herein the example of old and

¹ Rules without exceptions.

² "Tulipo-mania," "Narrencruidd;" Laurenberg, Pet. Hon-
 dius in lib. *Belg.*

The Epistle
Dedicatory.

new plantations, wherein noble spirits contented not themselves with trees, but by the attendance of aviaries, fish-ponds, and all variety of animals, they made their gardens the epitome of the earth, and some resemblance of the secular shows of old.

- [9] That we conjoin these parts of different subjects, or that this should succeed the other, your judgment will admit without impute of incongruity; since the delightful world comes after death, and paradise succeeds the grave; since the verdant state of things is the symbol of the resurrection, and to flourish in the state of glory, we must first be sown in corruption:—beside the ancient practice of noble persons, to conclude in garden-graves, and urns themselves of old to be wrapt up in flowers and garlands. xiii

Pictures of
Apelles.

- [10] “Nullum sine venia placuisse eloquium,” is more sensibly understood by writers, than by readers; nor well apprehended by either, till works have hanged out like Apelles his pictures: wherein even common eyes will find something for emendation.

- [11] To wish all readers of your abilities, were unreasonably to multiply the number of scholars beyond the temper of these times. But unto this ill-judging age, we charitably desire a portion of your equity, judgment, candour, and ingenuity; wherein you are so rich, as not to lose by diffusion. And being a flourishing branch of that noble family¹, unto whom we

¹ Of the most worthy Sir Edmund Bacon, prime baronet, my true and noble friend.

owe so much observance, you are not new set, but long rooted in such perfection; whereof having had so lasting confirmation in your worthy conversation, constant amity, and expression; and knowing you a serious student in the highest *arcana* of nature; with much excuse we bring these low delights, and poor maniples to your treasure.

Your affectionate Friend,
and Servant,

THOMAS BROWNE.

NORWICH, *May* 1 [1658].

THE GARDEN OF CYRUS.

CHAPTER I.

89 **T**HAT Vulcan gave arrows unto Apollo and [1]
Diana the fourth day after their nativities, Of the
according to Gentile theology, may pass for no Gardens of
blind apprehension of the creation of the sun Antiquity.
90 the diffused light contracted into orbs, and
shooting rays of those luminaries. Plainer descriptions there are from Pagan pens, of the creatures of the fourth day: while the divine philosopher¹ unhappily omitteth the noblest part of the third, and Ovid (whom many conceive to have borrowed his description from Moses), coldly deserting the remarkable account of the text, in three words² describeth this work of the third day,—the vegetable creation, and first ornamental scene of nature,—the primitive food of animals, and first story of physick in dietetical conservation.

For though physick may plead high, from [2]
that medical act of God, in casting so deep

¹ Plato in *Timæo* [xv-xvii].

² "Fronde tegi silvas" [*Met.* i. 44].

CHAP. I. a sleep upon our first parent, and chirurgery¹ find its whole art, in that one passage concerning the rib of Adam; yet is there no rivalry with garden contrivance and herbary; for if Paradise were planted the third day of the creation, as wiser divinity concludeth, the nativity thereof was too early for horoscopy: gardens were before gardeners, and but some hours after the earth.

Garden of
Paradise.

[3] Of deeper doubt is its topography and local designation; yet being the primitive garden, and without much controversy² seated in the east, it is more than probable the first curiosity and cultivation of plants most flourished in those quarters. And since the ark of Noah first touched upon some mountains of Armenia, the planting art arose again in the east, and found its revolution not far from the place of its nativity, about the plains of those regions. And if Zoroaster were either Cham, Chus, or Mizraim, they were early proficient therein, who left, as Pliny delivereth, a work of agriculture.

Pensile or
Hanging
Gardens of
Babylon,
ascribed to
Semiramis.

[4] However, the account of the pensile or hanging gardens of Babylon, if made by Semiramis, the third or fourth from Nimrod, is of no slender antiquity; which being not framed upon ordinary level of ground, but raised upon pillars, admitting under-passages, we cannot accept as the first Babylonian gardens,—but a more eminent

¹ διαίρεσις, in opening the flesh; ἐξαίρεσις, in taking out the rib; συνθεσις, in closing up the part again.

² For some there is from the ambiguity of the word [מקדם] *Mikedom*, whether *ab Oriente*, or a *principio* [Gen. ii. 8].

progress and advancement in that art than any that went before it; somewhat answering or hinting the old opinion concerning Paradise itself, with many conceptions elevated above the plane of the earth.

Nebuchodonosor (whom some will have to be [5] the famous Syrian king of Diodorus) beautifully repaired that city, and so magnificently built his hanging gardens¹, that from succeeding writers he had the honour of the first. From whence overlooking Babylon, and all the region about it, he found no circumscription to the eye of his ambition; till over-delighted with the bravery of this Paradise, in his melancholy metamorphosis he found the folly of that delight, and a proper punishment in the contrary habitation—in wild plantations and wanderings of the fields.

Those of
Nebuchodo-
nosor.

The Persian gallants, who destroyed this [6] monarchy, maintained their botanical bravery. Unto whom we owe the very name of Paradise, wherewith we meet not in Scripture before the time of Solomon, and conceived originally Persian. The word for that disputed garden expressing, in the Hebrew, no more than a field enclosed, which from the same root is content to derive a garden and a buckler.

Persian
origin of the
name
Paradise.

93 Cyrus the Elder, brought up in woods and [7] mountains, when time and power enabled, pursued the dictate of his education, and brought the treasures of the field into rule and circumscription. So nobly beautifying the hanging

Cyrus, the
elder, im-
proved the
gardens of
Babylon.

¹ Josephus [*Ant.* x. 11. § 1].

CHAP. I. gardens of Babylon, that he was also thought to be the author thereof.

[8] Ahasuerus (whom many conceive to have been Artaxerxes Longimanus), in the country and city of flowers¹, and in an open garden, entertained his princes and people, while Vashti more modestly treated the ladies within the palace thereof.

Cyrus, the younger, a manual planter of gardens.

[9] But if, as some opinion², King Ahasuerus were Artaxerxes Mnemon, that found a life and reign answerable unto his great memory, our magnified Cyrus was his second brother, who gave the occasion of that memorable work, and almost miraculous retreat of Xenophon. A person of high spirit and honour, naturally a king, though fatally prevented by the harmless chance of post-geniture ; not only a lord of gardens, but a manual planter thereof, disposing his trees, like his armies, in regular ordination. So that while old Laertes hath found a name in 94 Homer for pruning hedges, and clearing away thorns and briars ; while King Attalus lives for his poisonous plantations of aconites, henbane, hellebore, and plants hardly admitted within the walls of Paradise ; while many of the ancients do poorly live in the single names of vegetables ; all stories do look upon Cyrus as the splendid and regular planter.

[10] According whereto Xenophon³ describeth his

¹ *Sushan* in *Susiana*.

² Plutarch, in the *Life of Artaxerxes*.

³ Καλὰ μὲν τὰ δένδρα δι' ἴσου δὲ τὰ πεφυτευμένα, ὀρθοὶ δὲ οἱ στίχοι τῶν δένδρων, εὐγώνια δὲ πάντα καλῶς. In *Œconomico* [4, § 21].

gallant plantation at Sardis, thus rendered by CHAP. I.
 Strebæus. "*Arbores pari intervallo sitas, rectos* Xenophon's
ordines, et omnia perpulchrè in quincuncem description
directa." Which we shall take for granted as of his planta-
 tion at
 being accordingly rendered by the most elegant Sardis.
 of the Latins¹, and by no made term, but in
 use before by Varro. That is, the rows and
 orders so handsomely disposed, or five trees
 so set together, that a regular angularity, and
 thorough prospect, was left on every side.
 Owing this name not only unto the quintuple
 number of trees, but the figure declaring that
 number, which being doubled at the angle,
 makes up the letter X, that is, the emphatical
 95 decussation, or fundamental figure.

Now though, in some ancient and modern [11]
 practice, the area, or decussated plot might
 be a perfect square, answerable to a Tuscan
 pedestal, and the *quinquernio* or cinque point
 of a die, wherein by diagonal lines the inter-
 section was rectangular; accommodable unto
 plantations of large growing trees, and we must
 not deny ourselves the advantage of this order;
 yet shall we chiefly insist upon that of Curtius
 and Porta², in their brief description hereof.
 Wherein the *decussis* is made within in a longi-
 lateral square, with opposite angles, acute and
 obtuse at the intersection, and so upon pro-
 gression making a *rhombus* or lozenge figuration,
 which seemeth very agreeable unto the original
 figure. Answerable whereunto we observe the

Explanation
 of the rhom-
 boidal or
 lozenge
 formation.

¹ Cicero in *Cat. Major* [c. 17].

² Benedict. Curtius *de Hortis*. Bapt. Porta in *Villa*.

CHAP. I. decussated characters in many consulary coins; and even in those of Constantine and his sons, which pretend their pattern in the sky; the crucigerous ensign carried this figure, not transversely or rectangularly intersected, but in a decussation, after the form of an Andrean or Burgundian 96 cross, which answereth this description.

Compared
to St. An-
drew's cross;

[12] Where by the way we shall decline the old theme, so traced by antiquity, of crosses and crucifixion; whereof some being right, and of one single piece without transversion or transom, do little advantage our subject. Nor shall we take in the mystical *Tau*, or the cross of our blessed Saviour, which having in some descriptions an *Empedon*, or crossing footstay, made not one single transversion. And since the learned Lipsius hath made some doubt even of the cross of St. Andrew (since some martyrological histories deliver his death by the general name of a cross, and Hippolytus will have him suffer by the sword), we should have enough to make out the received cross of that martyr. Nor shall we urge the *Labarum*, and famous standard of Constantine, or make further use thereof, than as the first letters in the name of our Saviour Christ, in use among Christians, before the days of Constantine, to be observed in sepulchral monuments¹ of martyrs, in the reign of Adrian and Antoninus; and to be found 97 in the antiquities of the Gentiles, before the advent of Christ, as in the medal of King Ptolemy, signed with the same characters, and

¹ Of Marius, Alexander. *Roma Sotterranea*.

might be the beginning of some word or name, CHAP. I.
which antiquaries have not hit on.

We will not revive the mysterious crosses of [13]
Egypt, with circles on their heads, in the breast and the
of Serapis, and the hands of their genial spirits, Egyptian
not unlike the character of Venus, and looked *crux ansata*.
on by ancient Christians with relation unto
Christ. Since, however they first began, the
Egyptians thereby expressed the process and
motion of the spirit of the world, and the dif-
fusion thereof upon the celestial and elemental
nature; implied by a circle and right-lined
intersection,—a secret in their telesmes and
magical characters among them. Though he
that considereth the plain cross¹ upon the head
of the owl in the Lateran obelisk, or the cross²
erected upon a pitcher diffusing streams of water
into two basins, with sprinkling branches in
them, and all described upon a two-footed altar,
98 as in the hieroglyphicks of the brazen table of
Bembus, will hardly decline all thought of
Christian signality in them.

We shall not call in the Hebrew *Tenupha*, or [14]
ceremony of their oblations, waved by the priest The *Tenu-*
unto the four quarters of the world, after the *pha* of the
form of a cross, as in the peace offerings. And Jewish
if it were clearly made out what is remarkably rabbins.
delivered from the traditions of the rabbins,—
that as the oil was poured coronally or circularly

¹ Wherein the lower part is somewhat longer, as defined by
Upton *de Studio Militari*, and Johannes de Bado Aureo, cum
comment. clariss. et doctiss. Bissæi.

² Casal. *de Ritibus*., Bosio, *La Trionfante Croce*.

CHAP. I. upon the head of kings, so the high-priest was anointed decussatively or in the form of an X,—though it could not escape a typical thought of Christ, from mystical considerators, yet being the conceit is Hebrew, we should rather expect its verification from analogy in that language, than to confine the same unto the unconcerned letters of Greece, or make it out by the characters of Cadmus or Palamedes.

[15] Of this quincuncial ordination the ancients practised much, discoursed little; and the moderns have nothing enlarged; which he that more nearly considereth, in the form of its square rhombus, and decussation, with the several commodities, mysteries, parallelisms, and resemblances, both in art and nature, shall easily discern the elegance of this order.

The quincunx much used by the ancients, little discoursed of by the moderns.

[16] That this was in some ways of practice in divers and distant nations, hints or deliveries there are from no slender antiquity. In the hanging gardens of Babylon, from Abydenus, Eusebius, and others¹, Curtius describeth this rule of decussation. In the memorable garden of Alcinous, anciently conceived an original fancy from Paradise, mention there is of well contrived order; for so hath Didymus and Eustachius expounded the emphatical word. Diomedes, describing the rural possessions of his father, gives account in the same language of trees orderly planted. And Ulysses being a boy, was promised by his father forty fig-

Considerable, for its several commodities, mysticisms, parallelisms, and resemblances, both in nature and art.

Used in the gardens of Babylon and Alcinous; the plantations of Diomed's father;

¹ "Decussatio ipsa jucundum ac peramœnum conspectum præbuit." Curt. *Hortor.* l. 6.

trees, and fifty rows of vines producing all kinds of grapes. CHAP. I.

That the eastern inhabitants of India made [17] use of such order, even in open plantations, is deducible from Theophrastus; who, describing the trees whereof they made their garments, plainly delivereth that they were planted *κατ' ὄρχους*, and in such order that at a distance men would mistake them for vineyards¹. The same seems confirmed in Greece from a singular expression in Aristotle² concerning the order of vines, delivered by a military term representing the orders of soldiers, which also confirmeth the antiquity of this form yet used in vineal plantations; in those described by Theophrastus and Aristotle, and in later plantations;

That the same was used in Latin plantations [18] is plainly confirmed from the commending pen of Varro, Quintilian, and handsome description of Virgil³.

That the first plantations not long after the [19] flood were disposed after this manner, the generality and antiquity of this order observed in vineyards and vine plantations, affordeth some conjecture. And since, from judicious enquiry, Saturn, who divided the world between his three sons, who beareth a sickle in his hand, who taught the plantations of vines, the setting, grafting of trees, and the best part of agri-

¹ ὄρχοι, στίχοι ἀμπέλων, φυτῶν στίχος, ἡ κατὰ τάξιν φυτεία. Phavorinus, Philoxenus.

² συστάδας ἀμπέλων. *Polit.* vii. [10].

³ "Indulge ordinibus; nec secius omnis in unguem Arboribus positis secto via limite quadret."

Georg. ii. [277-8].

CHAP. I. culture, is discovered to be Noah,—whether this
 Probably by early dispersed husbandry in vineyards had not 107
 Noah, its original in that patriarch, is no such para-
 logical doubt.

[20] And if it were clear that this was used by
 and if so, why Noah after the flood, I could easily believe it
 not before was in use before it:—not willing to fix to
 the flood? such ancient inventions no higher original than
 Noah; nor readily conceiving those aged heroes,
 whose diet was vegetable, and only or chiefly
 consisted in the fruits of the earth, were much
 deficient in their splendid cultivations, or (after
 the experience of fifteen hundred years), left
 much for future discovery in botanical agricul-
 ture; nor fully persuaded that wine was the in-
 vention of Noah, that fermented liquors, which
 often make themselves, so long escaped their
 luxury or experience, that the first sin of the
 new world was no sin of the old; that Cain and
 Abel were the first that offered sacrifice; or
 because the Scripture is silent, that Adam or
 Isaac offered none at all.

[21] Whether Abraham, brought up in the first
 In Abra- planting country, observed not some rule hereof,
 ham's grove when he planted a grove at Beer-sheba; or 102
 at Beer- whether at least a like ordination were not in
 sheba; in the the garden of Solomon, probability may contest;
 garden of answerably unto the wisdom of that eminent
 Solomon. botanologer, and orderly disposer of all his
 other works. Especially since this was one
 piece of gallantry, wherein he pursued the spe-
 cious part of felicity, according to his own de-
 scription: "I made me gardens and orchards,

and planted trees in them of all kinds of fruits : CHAP. I.
 I made me pools of water, to water therewith
 the wood that bringeth forth trees¹." Which
 was no ordinary plantation, if according to the
 Targum, or Chaldee paraphrase, it contained
 all kinds of plants, and some fetched as far as
 India; and the extent thereof were from the
 wall of Jerusalem unto the water of Siloah.

And if Jordan were but *Jaar Eden*, that is [22]
 the river of Eden; Genesar but Gansar or the
 prince of gardens; and it could be made out,
 that the plain of Jordan were watered not com-
 paratively, but causally, and because it was the
 Paradise of God, as the learned Abramus²
 hinteth: he was not far from the prototype
 103 and original of plantations. And since even In Paradise
 in Paradise itself, the tree of knowledge was the tree of
 placed in the middle of the garden, whatever knowledge
 was the ambient figure, there wanted not a would supply
 centre and rule of decussation. Whether the a centre and
 rule of de-
 cussation.
 groves and sacred plantations of antiquity were
 not thus orderly placed, either by *quaternios*,
 or quintuple ordinations, may favourably be
 doubted. For since they were so methodical
 in the constitutions of their temples, as to ob-
 serve the due situation, aspect, manner, form,
 and order in architectonical relations, whether
 they were not as distinct in their groves and
 plantations about them, in form and species
 respectively unto their deities, is not without
 probability of conjecture. And in their groves
 of the sun this was a fit number by multiplication

¹ Eccles. ii. [5].

² *Vet. Testamenti Pharus.*

CHAP. I. to denote the days of the year; and might hieroglyphically speak as much, as the mystical statua of Janus¹ in the language of his fingers. And since they were so critical in the number of his horses, the strings of his harp, and rays about his head, denoting the orbs of heaven, 104 the seasons and months of the year, witty idolatry would hardly be flat in other appropriations.

¹ Which king Numa set up, with his fingers so disposed that they numerically denoted 365.—Pliny [*Hist. Nat.* xxxiv. 16].

CHAPTER II.

15 **N**OR was this only a form of practice in [1]
 plantations, but found imitation from high antiquity, in sundry artificial contrivances and manual operations. For (to omit the position of squared stones, *cuneatim* or wedgewise, in the walls of Roman and Gothick buildings, and the *lithostrata* or figured pavements of the ancients, which consisted not all of square stones, but were divided into triquetrous segments, honeycombs, and sexangular figures, according to Vitruvius); the squared stones and bricks, in ancient fabricks, were placed after this order, and two above or below, conjoined by a middle stone or *plinthus*; observable in the ruins of *Forum Nervæ*, the mausoleum of Augustus, the pyramid of Cestius, and the sculpture draughts of the larger pyramids of Egypt. And therefore in the draughts of eminent fabricks, painters
 106 do commonly imitate this order in the lines of their description.

The quincuncial form adopted in the Arts.

It is employed in various contrivances; in architecture,

In the laureat draught of sculpture and pictures, the leaves and foliate works are commonly thus contrived, which is but in imitation of the *pulvinaria*, and ancient pillow-work observable [2]

CHAP. II. in Ionick pieces, about columns, temples, and altars. To omit many other analogies in architectural draughts ; which art itself is founded upon fives¹, as having its subject and most graceful pieces divided by this number.

[3] The triumphal, oval, and civical crowns of laurel, oak, and myrtle, when fully made, were
 in the crowns of the ancients, plaited after this order. And (to omit the crossed crowns of Christian princes ; what figure that was which Anastasius described upon the head of Leo the Third ; or who first brought in the arched crown) ; that of Charles the Great (which seems the first remarkably closed crown), was framed after this² manner ; with an intersection 107 in the middle from the main crossing bars, and the interspaces, unto the frontal circle, continued by handsome net-work plates, much after this order. Whereon we shall not insist, because from greater antiquity, and practice of consecration, we meet with the radiated and starry crown, upon the head of Augustus, and many succeeding emperors. Since the Armenians and Parthians had a peculiar royal cap ; and the Grecians, from Alexander, another kind of diadem. And even diadems themselves were but fasciations, and handsome ligatures, about the heads of princes ; nor wholly omitted in the mitral crown, which common pictures seem to

¹ Of a structure five parts, *fundamentum, parietes, apertura, compartitio, tectum*. Leo, Alberti. Five columns, *Tuscan, Doric, Ionic, Corinthian, Compound*. Five different intercolumniations, *pseudostylos, diastilos, systilos, aræostylos, eustylos*. Vitruv. [*De Archit.* iii. 3].

² Uti constat ex pergamena apud Chifflet, in B. R. Bruxelli, et *Icon. Fam. Stradæ*.

set too upright and forward upon the head of CHAP. II.
Aaron; worn¹ sometimes singly, or doubly by
princes, according to their kingdoms; and no
more to be expected from two crowns at once,
upon the head of Ptolemy. And so easily made
out, when historians tell us, some bound up
wounds, some hanged themselves with diadems.

108 The beds of the ancients were corded some- [4]
what after this fashion: that is, not directly, as their beds,
ours at present, but obliquely, from side to side,
and after the manner of net-work; whereby they
strengthened the *spondæ* or bedsides, and spent
less cord in the net-work: as is demonstrated
by Blancanus².

And as they lay in crossed beds, so they sat [5]
upon seeming cross-legged seats; in which form ^{seats,}
the noblest thereof were framed: observable in ^{lattices,}
the triumphal seats, the *sella curulis*, or Edile
chairs; in the coins of Cestius, Sylla, and Julius.
That they sat also crossed-legged, many nobler
draughts declare; and in this figure the sitting
gods and goddesses are drawn in medals and
medallions³. And, beside this kind of work in
retiary and hanging textures, in embroideries,
and eminent needle-works, the like is obvious
unto every eye in glass windows. Nor only in
glass contrivances, but also in lattice and stone
work, conceived in the temple of Solomon;
wherein the windows are termed *fenestræ reti-*
culatæ, or lights framed like nets⁴. And agree-
109 able unto the Greek expression concerning

¹ Macc. xi. [13].

³ The larger sort of medals.

² Aristot. *Mechan. Quæst.*

⁴ δεικνυστά. [Ezek. xli. 16.]

CHAP. II. Christ in the Canticles¹, looking through the nets, which ours hath rendered, "he looketh forth at the windows, showing himself through the lattice;" that is, partly seen and unseen, according to the visible and invisible sides of his nature. To omit the noble reticulate work, in the chapiters of the pillars of Solomon, with lilies and pomegranates upon a net-work ground; and the *craticula* or grate through which the ashes fell in the altar of burnt offerings.

- [6] That the net-works and nets of antiquity were little different in the form from ours at present, is confirmable from the nets in the hands of the retiary gladiators, the proper combatants with the *Secutores*. To omit the ancient *conoipeion* or gnat-net of the Ægyptians, the inventors of that artifice; the rushy labyrinths of Theocritus; the nosegay nets, which hung from the head under the nostrils of princes; and that uneasy metaphor of *reticulum jecoris*², which some expound the lobe, we the caul above the liver. As for that famous net-work of Vulcan, II which inclosed Mars and Venus, and caused that³ unextinguishable laugh in heaven,—since the gods themselves could not discern it, we shall not pry into it: although why Vulcan bound them, Neptune loosed them, and Apollo should first discover them, might afford no vulgar mythology. Heralds have not omitted this order or imitation thereof, while they symbolically adorn their scutcheons with masles,

¹ Cant. ii. [9].

² In Leviticus [iii. 4, 10, 15].

³ Ἀσβεστος δ' ἄρ' ἐνώρτο γέλως. Hom. [*Od.* viii. 326].

CHAP. II.
fusils, and saltyres, and while they dispose the figures of ermines, and vaired coats in this quincuncial method¹.

The same is not forgot by lapidaries, while [7] they cut their gems pyramidally, or by equicrural triangles. Perspective pictures, in their base, horizon, and lines of distances, cannot escape these rhomboidal decussations. Sculptors in their strongest shadows, after this order do draw their double hatches. And the very Americans do naturally fall upon it, in their neat and curious textures, which is also observed in the elegant artifices of Europe. But this is no law unto the woof of the neat retiary spider, which seems to weave without transversion, and by the union of right lines to make out a continual surface, which is beyond the common art of textury, and may still nettle Minerva², the goddess of that mystery. And he that shall hatch the little seeds, either found in small webs, or white round eggs, carried under the bellies of some spiders, and behold how at their first production in boxes, they will presently fill the same with their webs, may observe the early and untaught finger of nature, and how they are natively provided with a stock sufficient for such texture.

The rural charm against dodder, tetter, and strangling weeds, was contrived after this order, while they placed a chalked tile at the four

¹ "De armis scaccatis, masculatis, invectis, fuselatis," *vide* Spelman, *Aspilox*.; et Upton, cum erudit. Byssæo.

² As in the contention between Minerva and Arachne.— [Ovid, *Met.* vi. 145.]

CHAP. II. corners, and one in the middle of their fields : which, though ridiculous in the intention, was rational in the contrivance, and a good way to diffuse the magick through all parts of the area.

[9] Somewhat after this manner they ordered the little stones in the old game of *Pentalithismus*, ¹¹² or casting up five stones to catch them on the back of their hand. And with some resemblance hereof, the *proci* or prodigal paramours disposed their men, when they played at *Penelope*¹. For being themselves an hundred and eight, they set fifty-four stones on either sides, and one in the middle, which they called Penelope ; which he that hit was master of the game.

in the game
of *Pentali-*
thismus ;

[10] In chess boards and tables we yet find pyramids and squares. I wish we had their true and ancient description, far different from ours, or the *chet mat* of the Persians, which might continue some elegant remarkables, as being an invention as high as Hermes the secretary of Osyris, figuring² the whole world, the motion of the planets, with eclipses of sun and moon.

[11] Physicians are not without the use of this decussation in several operations, in ligatures and union of dissolved continuities. Mechanics make use hereof in forcipal organs, and instruments of incision ; wherein who can but magnify the power of decussation, inservient to contrary ¹¹³ ends, solution and consolidation, union and division, illustrable from Aristotle in the old *nucifragium*, or nutcracker, and the instruments of evulsion, compression, or incision ; which

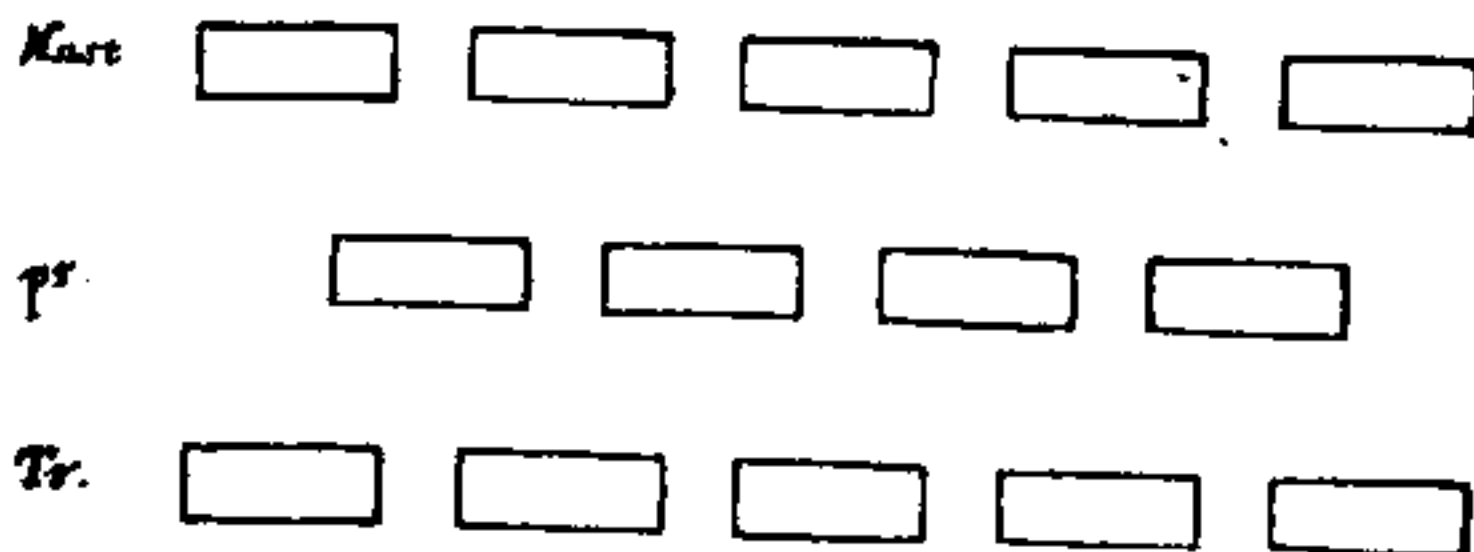
in ligatures,
and forcipal
instruments,

¹ In Eustathius, his Comment upon Homer.

² Plato.

consisting of two *vectes*, or arms, converted towards each other, the innitency and stress being made upon the *hypomochlion*, or fulcrum in the decussation, the greater compression is made by the union of two impulsors.

The Roman *battalia*¹ was ordered after this manner, whereof as sufficiently known, Virgil hath left but an hint, and obscure intimation. For thus were the maniples and cohorts of the *hastati*, *principes*, and *triarii* placed in their bodies, wherein consisted the strength of the Roman battle. By this ordination they readily fell into



each other; the *hastati* being pressed, handsomely retired into the intervals of the *principes*, these into that of the *triarii*, which making as it were a new body, might jointly renew the battle, wherein consisted the secret of their successes. And therefore it was remarkably² singular in the battle of Africa, that Scipio, fearing a rout from the elephants of the enemy,

¹ In the disposure of the legions in the wars of the republick, before the division of the legion into ten cohorts by the Emperors. Salmas. in his *Epistle à Monsieur de Peyresc. De Re Militari Romanorum*.

² Polybius [xv. 2]; Appianus [lib. viii. §§ 124-6].

CHAP. II. left not the *principes* in their alternate distances, whereby the elephants, passing the vacuities of the *hastati*, might have run upon them, but drew his battle into right order, and leaving the passages bare, defeated the mischief intended by the elephants. Out of this figure were made two remarkable forms of battle, the *cuneus* and *forceps*, or the shear and wedge battles, each made of half a *rhombus*, and but differenced by position. The wedge invented to break or work into a body, the *forceps* to environ and defeat the power thereof, composed out of the selectest soldiery, and disposed into the form of a V, wherein receiving the wedge, it enclosed it on both sides. After this form the famous Narses¹ ordered his battle against the Franks, and by this figure the Almans were enclosed, and cut in pieces. 115

[13] The *rhombus* or lozenge-figure so visible in this order, was also a remarkable form of battle in the Grecian cavalry², observed by the Thessalians, and Philip king of Macedon, and frequently by the Parthians; as being most ready to turn every way, and best to be commanded, as having its ductors or commanders at each angle.

[14] The Macedonian phalanx (a long time thought invincible), consisted of a long square. For 116 though they might be sixteen in rank and file, yet when they shut close, so that the sixth pike advanced before the first rank, though the number might be square, the figure was oblong, answerable unto the quincuncial quadrate of

in the
Macedonian
phalanx;

¹ Agathias. Ammianus, [xxvii. 2]

² Ælian. Tact.

Curtius. According to this square, Thucydides CHAP. II. delivers, the Athenians disposed their battle against the Lacedemonians, brickwise¹, and by the same word the learned Guellius expoundeth the *quadrate* of Virgil, after the form of a brick or tile².

And as the first station and position of trees, [15] so was the first habitation of men, not in round cities, as of later foundation; for the form of Babylon the first city was square, and so shall also be the last, according to the description of the holy city in the Apocalypse. The famous pillars of Seth, before the flood, had also the like foundation³, if they were but antediluvian obelisks, and such as Cham and his Egyptian race imitated after the flood. the ancient cities built in square or parallelogram;

But Nineveh, which authors acknowledge to [16] have exceeded Babylon, was of a longilateral figure⁴, ninety-five furlongs broad, and an hundred and fifty long, and so making about sixty miles in circuit, which is the measure of three days' journey, according unto military marches, or castrensial mansions. So that if Jonas entered at the narrower side, he found enough for one day's walk to attain the heart of the city, to make his proclamation. And if we imagine a city extending from Ware to London, the expression will be moderate of sixscore thousand infants, although we allow vacuities, fields, and intervals of habitation; as there

¹ ἐν πλασίῳ.—[Thucyd. vi. 67.]

² "Secto via limite quadret."—*Comment. in Virgil.*

³ Obelisks, being erected upon a square base.

⁴ Diod. Sic. [ii. 7].

CHAP. II. needs must be when the monument of Ninus took up no less than ten furlongs.

- [17] And, though none of the seven wonders, yet a noble piece of antiquity, and made by a copy exceeding all the rest, had its principal parts disposed after this manner; that is, the Labyrinth of Crete, built upon a long quadrate, containing five large squares; communicating by right inflexions, terminating in the centre of the middle square, and lodging of the Minotaur, if we conform unto the description of the elegant medal thereof in Agostino¹. And though in many accounts we reckon grossly by the square, yet is that very often to be accepted as a longsided quadrate, which was the figure of the ark of the covenant, the table of the shewbread, and the stone wherein the names of the twelve tribes were engraved, that is, three in a row, naturally making a longilateral figure, the perfect quadrate being made by nine.
- [18] What figure the stones themselves maintained, tradition and Scripture are silent, yet lapidaries in precious stones affect a table or long square, and in such proportion, that the two lateral, and also the three inferior tables are equal unto the superior; and the angles of the lateral tables contain and constitute the *hypothenusæ*, or broader sides subtending.
- [19] That the tables of the law were of this figure, general imitation and tradition hath confirmed. Yet are we unwilling to load the shoulders of Moses with such massy stones, as some pictures lay upon them; since it is plainly delivered that

in the
labyrinth of
Crete, pro-
bably in the
ark, the
table of
shewbread,
and those of
the law.

¹ Antonio Agostino, *Delle Medaglie*.

he came down with them in his hand; since
 119 the word strictly taken implies no such massy
 hewing, but cutting, and fashioning of them into
 shape and surface; since some will have them
 emeralds, and if they were made of the materials
 of Mount Sinai, not improbable that they were
 marble; since the words were not many, the
 letters short of seven hundred, and the tables,
 written on both sides, required no such capacity.

The beds of the ancients were different from [20]
 ours at present, which are almost square, being
 framed oblong, and about a double unto their
 breadth; not much unlike the area, or bed of
 this quincuncial quadrate. The single beds of
 Greece were six feet¹ and a little more in length,
 three in breadth; the giant-like bed of Og, which
 had four cubits of breadth, nine and a half in
 length, varied not much from this proportion.
 The funeral bed of King Cheops, in the greater
 pyramid, which holds seven in length, and four
 feet in breadth, had no great deformity from
 this measure; and whatsoever were the breadth,
 the length could hardly be less, of the tyrannical
 bed of Procrustes, since in a shorter measure he
 120 had not been fitted with persons for his cruelty
 of extension. But the old sepulchral bed, or
 Amazonian tomb² in the market place of
 Megara, was in the form of a lozenge, readily
 made out by the composure of the body; for
 the arms not lying fasciated or wrapt up after the
 Grecian manner, but in a middle distension, the
 including lines will strictly make out that figure.

Several beds
 of the
 ancients
 mentioned.

¹ Aristot. *Mechan.* [c. 126]. ² Plut. *in Vit. Thes.* [c. xxvii].

CHAPTER III.

[1] **N**OW although this elegant ordination of 121
 vegetables hath found coincidence or imitation in sundry works of art, yet is it not also destitute of natural examples; and, though overlooked by all, was elegantly observable, in several works of nature.

* The quincuncial form observable in many of the works of nature.

[2] Could we satisfy ourselves in the position of the lights above, or discover the wisdom of that order so invariably maintained in the fixed stars of heaven; could we have any light, why the stellary part of the first mass separated into this order, that the girdle of Orion should ever maintain its line, and the two stars in Charles' wain never leave pointing at the pole star; we might abate the Pythagorical musick of the spheres, the sevenfold pipe of Pan, and the strange cryptography of Gaffarel in his starry book of heaven.

[3] But, not to look so high as heaven, or the 122
 single quincunx of the *Hyades* upon the head of Taurus, the triangle, and remarkable *crusero* about the foot of the Centaur,—observable rudiments there are hereof in subterraneous con-

To pass over the constellations, we find it in gypsum.

cretions, and bodies in the earth; in the *gypsum* CHAP. III.
 or *talcum rhomboides*, in the *favaginites*, or In the
 honeycomb stone, in the *asteria* and *astroites*, *asteria*;
 and in the crucigerous stone of S. Jago of
 Gallicia.

The same is observably effected in the *jülus*, [4]
 catkins, or pendulous excrescencies of several in the *jüli* of
 trees; of walnuts, alders, and hazels, which several
 hanging all the winter, and maintaining their plants; in
 network close, by the expansion thereof are the the flowers
 early foretellers of the spring: discoverable also and seed-
 in long pepper, and elegantly in the *jülus* of heads of
calamus aromaticus, so plentifully growing with others; in
 us, in the first palms of willows, and in the some fruits; *
 flowers of sycamore, *petasites*, *asphodelus*, and in the net-
blattaria, before explication. After such order work of some
 123 stand the flowery branches in our best spread sea-weeds.
verbascum, and the seeds about the spicous
 head or torch of *thapsus barbatus*, in as fair
 a regularity as the circular and wreathed order
 will admit, which advanceth one side of the
 square, and makes the same rhomboidal. In
 the squamous heads of scabious knapweed, and
 the elegant *jacea pinea*, and in the scaly com-
 pōsure of the oak rose¹, which some years most
 aboundeth. After this order hath nature planted
 the leaves in the head of the common and
 prickled artichoke, wherein the black and
 shining flies do shelter themselves, when they
 retire from the purple flower about it. The

¹ *Capitula squamata quercuum*, Bauhini, whereof though
 he saith "perraro reperiuntur, bis tantum invenimus;" yet we
 find them commonly with us and in great numbers.

CHAP. III. same is also found in the pricks, sockets, and impressions of the seeds, in the pulp or bottom thereof; wherein do elegantly stick the fathers of their mother¹: to omit the quincuncial specks on the top of the miscle-berry, especially that which grows upon the *tilia*, or lime tree; and the remarkable disposure of those yellow fringes about the purple pestil of Aaron, and elegant clusters of dragons, so peculiarly secured by nature, with an umbrella or skreening leaf about 124 them.

[5] The spongy leaves of some sea wracks, fucus, oaks, in their several kinds, found about the shore², with ejectments of the sea, are overwrought with net-work elegantly containing this order: which plainly declareth the naturality of this texture; and how the needle of nature delighteth to work, even in low and doubtful vegetations.

[6] The *arbustetum* or thicket on the head of the teazel, may be observed in this order: and he that considereth that fabrick so regularly palisadoed, and stemmed with flowers of the royal colour, in the house of the solitary maggot³ may find the seraglio of Solomon; and contemplating the calicular shafts, and uncous disposure of their extremities, so accommodable unto the office of abstersion, not condemn as wholly improbable the conceit of those who accept it for

In teazel,
bur, thistle,
and elder.

¹ *Anthol. Græc.* inter epigrammata γριφώδη. *Ενδον ἐμῶν λαγόνων μητρός ἔχω πατέρα [xiv. 58].

² Especially the *porus cervinus*, *imperati*, *sporosa*, or alga πλατυκέρως, Bauhini.

³ There being a single maggot found almost in every head.

the herb *borith*¹. Where, by the way, we could CHAP. III.
with much enquiry never discover any trans-
figuration in this abstemious insect, although we
125 have kept them long in their proper houses and
boxes. Where some, wrapt up in their webs,
have lived upon their own bowels from Septem-
ber unto July.

In such a grove do walk the little creepers [7]
about the head of the burr; and such an order
is observed in the aculeous prickly plantation
upon the heads of several common thistles,
remarkably in the notable palisadoes about the
flower of the milk thistle; and he that enquireth
into the little bottom of the globe thistle, may
find that gallant bush arise from a scalp of like
disposure.

The white umbrella, or medical bush of elder, [8]
is an epitome of this order, arising from five
main stems quincuncially disposed, and toler-
ably maintained in their subdivisions. To omit
the lower observations in the seminal spike of
mercury wild, and plantain.

Thus hath nature ranged the flowers of sant- [9]
foyn, and French honeysuckle, and somewhat
after this manner hath ordered the bush in
126 Jupiter's beard, or houseleek, which old super-
stition set on the tops of houses, as a defensa-
tive against lightning and thunder. The like
in fenny seagreen, or the water soldier², which,
though a military name from Greece, makes out
the Roman order.

A like ordination there is in the favaginous [10]

¹ Jer. ii. 22; Mal. iii. 2.

² *Stratiotes* [στρατιώτης].

CHAP. III. sockets, and lozenge seeds of the noble flower
 In sun- of the sun; wherein in lozenge-figured boxes
 flower, fir- nature shuts up the seeds, and balsam which is
 apples, &c. about them.

- [11] But the fir and pine tree from their fruits do naturally dictate this position; the rhomboidal protuberances^{*} in pine apples maintaining this quincuncial order unto each other, and each rhombus in itself. Thus are also disposed the triangular foliations in the conical fruit of the fir tree orderly shadowing and protecting the winged seeds below them.
- [12] The like so often occurreth to the curiosity of observers, especially in spicated seeds and flowers, that we shall not need to take in the single quincunx of *Fuchsius* in the growth of ¹²⁷ the male fern, the seedy disposure of *gramen ischemon*, and the trunk or neat reticulate work in the cod of the sachel palm.
- [13] For even in very many round stalked plants, the leaves are set after a quintuple ordination, the first leaf answering the fifth in lateral disposition. Wherein the leaves successively rounding the stalk, in four, at the furthest, the compass is absolved, and the fifth leaf or sprout returns to the position of the other fifth before it; as in accounting upward is often observable in furze, pellitory, ragweed, the sprouts of oaks and thorns, upon pollards¹, and very remarkably in the regular disposure of the rugged excrescencies in the yearly shoots of the pine.
- [14] But in square stalked plants, the leaves stand

¹ Upon pollard oak and thorns.

respectively unto each other, either in cross or CHAP. III.
decussation to those above or below them, arising
at cross positions; whereby they shadow not
each other, and better resist the force of winds,
128 which in a parallel situation, and upon square
stalks, would more forcibly bear upon them.

And, to omit how leaves and sprouts, which [15]
compass not the stalk, are often set in a *rhomboides*, and making long and short diagonals, to
stand like the legs of quadrupeds when they
go; nor to urge the thwart enclosure and furd-
ling of flowers and blossoms before explications,
as in the multiplied leaves of piony; and the
chiasmus in five-leaved flowers, while one lies
wrapt about the staminous beards, the other
four obliquely shutting and closing upon each
other, and how even flowers which consist of
four leaves, stand not ordinarily in three and
one, but two, and two crosswise, unto the *stylus*;
even the autumnal buds, which await the return
of the sun, do after the winter solstice multiply
their calicular leaves, making little rhombuses,
and net-work figures, as in the sycamore and
lilack.

The like is discoverable in the original pro- [16]
duction of plants, which first putting forth two
129 leaves, those which succeed bear not over each
other, but shoot obliquely or crosswise, until the
stalk appeareth, which sendeth not forth its
first leaves without all order unto them, and he
that from hence can discover in what position
the two first leaves did arise, is no ordinary
observer.

CHAP. III.

In the rudimental spring of seeds.

The process of germination considered.

Where, by the way, he that observeth the
 [17] rudimental spring of seeds, shall find strict rule,
 although not after this order. How little is
 required unto effectual generation, and in what
 diminutives the plastick principle lodgeth is
 exemplified in seeds, wherein the greater mass
 affords so little comproduction. In beans the
 leaf and root sprout from the germen, the main
 sides split, and lie by; and in some pulled up near
 the time of blooming, we have found the pulpous
 sides entire or little wasted. In acorns the nib
 dilating splitteth the two sides, which some-
 times lie whole, when the oak is sprouted two
 handfuls. In lupines these pulpy sides do some-
 times arise with the stalk in the resemblance of
 two fat leaves. Wheat and rye will grow up,
 if after they have shot some tender roots, the
 adhering pulp be taken from them. Beans will
 prosper though a part be cut away, and so much
 set as sufficeth to contain and keep the germen
 close. From this superfluous pulp, in unkindly
 and wet years, may arise that multiplicity of
 little insects, which infest the roots and sprouts
 of tender grains and pulses.

[18] In the little nib or fructifying principle, the
 motion is regular, and not transvertible, as to
 make that ever the leaf, which nature intended
 the root; observable from their conversion,
 until they attain their right position, if seeds be
 set inversedly.

[19] In vain we expect the production of plants
 from different parts of the seed; from the same
 corculum or little original proceed both germi-

nations ; and in the power of this slender par- CHAP. III.
 ticle lie many roots and sprouts, that though the
 same be pulled away, the generative particle
 will renew them again, and proceed to a perfect
 plant ; and malt may be observed to grow,
 though the cummes be fallen from it.

131 The seminal nib hath a defined and single [20]
 place, and not extended unto both extremes.
 And therefore many too vulgarly conceive that
 barley and oats grow at both ends ; for they
 arise from one punctilio or generative nib,
 and the spear sliding under the husk, first
 appeareth nigh the top. But in wheat and rye
 being bare, the sprouts are seen together. If
 barley unhulled would grow, both would appear
 at once. But in this and oatmeal the nib is
 broken away, which makes them the milder
 food and less apt to raise fermentation in
 decoctions.

Men taking notice of what is outwardly visible, [21]
 conceive a sensible priority in the root. But as
 they begin from one part, so they seem to start
 and set out upon one signal of nature. In beans
 yet soft, in peas while they adhere unto the cod,
 the rudimental leaf and root are discoverable.
 In the seeds of rocket and mustard, sprouting
 in glasses of water, when the one is manifest,
 the other is also perceptible. In muddy waters
 132 apt to breed duckweed, and periwinkles, if
 the first and rudimental strokes of duckweed
 be observed, the leaves and root anticipate not
 each other. But in the date-stone the first
 sprout is neither root nor leaf distinctly, but both

CHAP. III. together; for the germination being to pass through the narrow navel and hole about the midst of the stone, the generative germ is fain to enlengthen itself, and shooting out about an inch, at that distance divideth into the ascending and descending portion.

[22] And though it be generally thought, that seeds will root at that end, where they adhere to their originals, and observable it is that the nib sets most often next the stalk, as in grains, pulses, and most small seeds :—yet is it hardly made out in many greater plants. For in acorns, almonds, pistachios, walnuts, and acuminate shells, the germ puts forth at the remotest part of the pulp. And therefore to set seeds in that posture, wherein the leaf and roots may shoot right without contortion or forced circumvolution, which might 133 render them strongly rooted, and straighter, were a criticism in agriculture. And nature seems to have made some provision hereof in many from their figure, that as they fall from the tree they may lie in positions agreeable to such advantages.

[23] Beside the open and visible testicles of plants, the seminal powers lie in great part invisible, while the sun finds polypody in stone-walls, the little stinging nettle and nightshade in barren sandy highways, scurvy-grass in Greenland, and unknown plants in earth brought from remote countries. Beside the known longevity of some trees, what is the most lasting herb, or seed, seems not easily determinable. Mandrakes upon known account have lived near an hundred years. Seeds found in wildfowls' gizzards

have sprouted in the earth. The seeds of marjoram and *stramonium* carelessly kept, have grown after seven years. Even in garden plots long fallow, and digged up, the seeds of *blattaria* and yellow henbane, after twelve years' burial, have produced themselves again.

That bodies are first spirits Paracelsus could [24] affirm, which in the maturation of seeds and fruits, seems obscurely implied by Aristotle¹, when he delivereth, that the spirituous parts are converted into water, and the water into earth; and attested by observation in the maturative progress of seeds, wherein at first may be discerned a flatuous distension of the husk, afterwards a thin liquor, which longer time digesteth into a pulp or kernel, observable in almonds and large nuts. And some way answered in the progressional perfection of animal semination, in its spermatical maturation from crude pubescency unto perfection. And even that seeds themselves in their rudimental discoveries appear in foliaceous surcles, or sprouts within their coverings, in a diaphanous jelly, before deeper incrassation, is also visibly verified in cherries, acorns, plums.

From seminal considerations, either in reference unto one mother, or distinction from animal production, the Holy Scripture describeth the vegetable creation; and while it divideth plants but into herb and tree, though it seemeth to make but an accidental division, from magnitude, it tacitly containeth the natural distinction

¹ In *Met.* [iv. 3] cum Cabelo.

CHAP. III. of vegetables, observed by herbarists, and comprehending the four kinds. For since the most natural distinction is made from the production of leaf or stalk, and plants after the two first seminal leaves, do either proceed to send forth more leaves, or a stalk, and the folious and stalky emission distinguisheth herbs and trees. In a large acception it compriseth all vegetables: for the *frutex* and *suffrutex* are under the progression of trees: they stand authentically differenced but from the accidents of the stalk.

[26] The equivocal production of things under undiscerned principles, makes a large part of generation, though they seem to hold a wide univocacy in their set and certain originals, while almost every plant breeds its peculiar insect, most a butterfly, moth, or fly, wherein the oak seems to contain the largest seminality, while the julus¹, oak-apple, pill, woolly tuft, foraminous roundles upon the leaf, and grapes 136 underground make a fly with some difference. The great variety of flies lies in the variety of their originals; in the seeds of caterpillars or cankers there lieth not only a butterfly or moth, but if they be sterile or untimely cast, their production is often a fly, which we have also observed from corrupted and mouldered eggs both of hens and fishes; to omit the generation of bees out of the bodies of dead heifers, or what is strange, yet well attested, the pro-

Digression,
on the pro-
duction of
one creature
from the
body of
another.

Explained
of the
*ichneumo-
nidæ*, and
entozoa.

¹ These and more to be found upon our oaks; not well described by any till the edition of *Theatrum Botanicum*.

duction of eels in the backs of living cods and CHAP. III.
perches¹.

The exiguity and smallness of some seeds [27]
extending to large productions, is one of the
magnalities of nature, somewhat illustrating the
work of the creation, and vast production from
nothing. The true² seeds of cypress and ram-
pions are indistinguishable by old eyes. Of the
seeds of tobacco a thousand make not one
grain. The disputed seeds of hartstongue and
maidenhair, require a great number. From
such undiscernable seminalities arise spon-
137 taneous productions. He that would discern
the rudimental stroke of a plant, may behold
it in the original of duckweed, at the bigness
of a pin's point, from convenient water in
glasses, wherein a watchful eye may also dis-
cover the puncticular originals of periwinkles
and gnats.

That seeds of some plants are less than any [28]
animals, seems of no clear decision; that the
biggest of vegetables exceedeth the biggest of
animals, in full bulk, and all dimensions, admits
exception in the whale, which in length and
above-ground-measure, will also contend with
tall oaks. That the richest odour of plants,
surpasseth that of animals, may seem of some
doubt, since animal-musk seems to excel the
vegetable, and we find so noble a scent in the
tulip-fly, and goat-beetle³.

¹ Schoneveldus, *De Pisc.*

² Doctissim. Laurenberg. *Hort.*

³ The long and tender green *capricornus*, rarely found; we
could never meet with but two.

CHAP. III. Now whether seminal nibs hold any sure
 [29] proportion unto seminal enclosures, why the
 form of the germ doth not answer the figure
 of the enclosing pulp, why the nib is seated
 upon the solid, and not the channelled side of
 the seed as in grains, why since we often meet 138
 with two yolks in one shell, and sometimes one
 egg within another, we do not oftener meet with
 two nibs in one distinct seed, why since the
 eggs of a hen laid at one course, do commonly
 outweigh the bird, and some moths coming out
 of their cases, without assistance of food, will
 lay so many eggs as to outweigh their bodies,
 trees rarely bear their fruit in that gravity or
 proportion : whether in the germination of
 seeds, according to Hippocrates, the lighter
 part ascendeth, and maketh the sprout, the
 heaviest tending downward frameth the root,
 since we observe that the first shoot of seeds
 in water will sink or bow down at the upper and
 leafing end ; whether it be not more rational
 Epicurism to contrive whole dishes out of the
 nibs and spirited particles of plants, than from
 the gallatures and treddles of eggs, since that
 part is found to hold no seminal share in oval
 generation, are queries which might enlarge,
 but must conclude this digression.

[30] And though not in this order, yet how Nature 139
 delighteth in this number, and what consent and
 co-ordination there is in the leaves and parts of
 flowers, it cannot escape our observation in no
 small number of plants. For the calicular or
 supporting and closing leaves, do answer the

The number
 five exists
 in many
 instances, in
 the leaves
 and parts
 of flowers,

number of the flowers, especially such as exceed CHAP. III.
 not the number of swallows' eggs¹; as in violets, and is re-
 stitchwort, blossoms, and flowers of one leaf markable in
 have often five divisions, answered by a like every circle.
 number of calicular leaves, as *gentianella*, *con-*
volvulus, bell flowers. In many, the flowers,
 blades, or staminous shoots and leaves are all
 equally five, as in cockle, mullein, and *blattaria*;
 wherein the flowers before explication are pen-
 tagonally wrapped up with some resemblance
 of the *blatta* or moth, from whence it hath its
 name. But the contrivance of nature is singular
 in the opening and shutting of bindweeds per-
 formed by five inflexures, distinguishable by
 pyramidal figures, and also different colours.

140 The rose at first is thought to have been of [31]
 five leaves, as it yet groweth wild among us,
 but in the most luxuriant, the calicular leaves
 do still maintain that number. But nothing is
 more admired than the five brethren of the rose,
 and the strange disposure of the appendices or
 beards, in the calicular leaves thereof, which in
 despair of resolution is tolerably salved from
 this contrivance, best ordered and suited for the
 free closure of them before explication. For
 those two which are smooth, and of no beard,
 are contrived to lie undermost, as without promi-
 nent parts, and fit to be smoothly covered; the
 other two which are beset with beards on either
 side, stand outward and uncovered, but the fifth
 or half-bearded leaf is covered on the bare side,

¹ Which exceed not five.

CHAP. III. but on the open side stands free, and bearded like the other.

[32] Besides, a large number of leaves have five divisions, and may be circumscribed by a pentagon or figure of five angles, made by right lines from the extremity of their leaves, as in maple, vine, fig-tree; but five-leaved flowers are 141 commonly disposed circularly about the stylus, according to the higher geometry of nature, dividing a circle by five radii, which concur not to make diameters, as in quadrilateral and sexangular intersections.

[33] Now the number of five is remarkable in every circle, not only as the first spherical number, but the measure of spherical motion. For spherical bodies move by fives, and every globular figure placed upon a plane, in direct volutation, returns to the first point of contact in the fifth touch, accounting by the axes of the diameters or cardinal points of the four quarters thereof. And before it arriveth unto the same point again, it maketh five circles equal unto itself, in each progress from those quarters absolving an equal circle.

Other
instances of
the number
five.

[34] By the same number doth nature divide the circle of the sea star, and in that order and number disposeth these elegant semicircles, or dental sockets and eggs in the sea hedgehog. And no mean observation hereof there is in the mathematicks of the neatest retiary spider, 142 which concluding in forty-four circles, from five semidiameters beginneth that elegant texture.

[35] And after this manner doth lay the founda-

tion of the circular branches of the oak, which being five-cornered in the tender annual sprouts, and manifesting upon incision the signature of a star, is after made circular, and swelled into a round body; which practice of nature is become a point of art, and makes two problems in Euclid¹. But the bramble which sends forth shoots and prickles from its angles, maintains its pentagonal figure, and the unobserved signature of a handsome porch within it. To omit the five small buttons dividing the circle of the ivy berry, and the five characters in the winter stalk of the walnut, with many other observables, which cannot escape the eyes of signal discerners; such as know where to find Ajax his name in *delphinium*, or Aaron's mitre in henbane.

- 143 Quincuncial forms and ordinations are also [36] observable in animal figurations. For to omit the *hyoides* or throat bone of animals, the *furcula* or merry-thought in birds, which supporteth the *scapulæ*, affording a passage for the windpipe and the gullet, the wings of flies, and disposure of their legs in their first formation from maggots, and the position of their horns, wings, and legs, in their aurelian cases and swaddling clouts,—the back of the *cimex arboreus*, found often upon trees and lesser plants, doth elegantly discover the Burgundian decussation; and the like is observable in the belly of the *notonecton*, or water beetle, which swimmeth on its back, and the handsome *rhom-*

In animal
figurations;
in some
insects; and
in honey-
comb.

¹ *Elem.* lib. 4 [Prop. 11, 14].

CHAP. III. *bus* of the sea poult, or werrel, on either side the spine.

[37] The sexangular cells in the honeycombs of bees are disposed after this order (much there is not of wonder in the confused houses of pismires, though much in their busy life and actions), more in the edificial palaces of bees and monarchical spirits, who make their combs 144 six cornered, declining a circle (whereof many stand not close together, and completely fill the area of the place); but rather affecting a six-sided figure, whereby every cell affords a common side unto six more, and also a fit receptacle for the bee itself, which gathering into a cylindrical figure, aptly enters its sexangular house, more nearly approaching a circular figure, than either doth the square or triangle; and the combs themselves so regularly contrived, that their mutual intersections make three lozenges at the bottom of every cell; which severally regarded make three rows of neat rhomboidal figures, connected at the angles, and so continue three several chains throughout the whole comb.

[38] As for the *favago*, found commonly on the sea shore, though named from a honeycomb, it but rudely makes out the resemblance, and better agrees with the round cells of humble bees. He that would exactly discern the shape of a bee's mouth, needs observing eyes, and good augmenting glasses; wherein is discoverable 145 one of the neatest pieces in nature; and he must have a more piercing eye than mine who finds out the shape of bulls' heads in the guts of

drones pressed out behind, according to the CHAP. III.
experiment of Gomesius¹, wherein, notwithstanding, there seemeth somewhat which might incline a pliant fancy to credulity of similitude.

A resemblance hereof there is in the orderly [39]
and rarely disposed cells made by flies and In the eyes,
insects, which we have often found fastened eggs, and
about small sprigs, and in those cottonnary and cells of
woolly pillows which sometimes we meet with insects, in
fastened unto leaves, there is included an elegant the skins of
net-work texture, out of which come many small snakes, the
flies. And some resemblance there is of this tail of the
order in the eggs of some butterflies and moths, beaver.
as they stick upon leaves and other substances,
which being dropped from behind, nor directed
by the eye, doth neatly declare how nature
geometrize and observeth order in all things.

146 A like correspondency in figure is found in [40]
the skins and outward teguments of animals,
whereof a regardable part are beautiful by this
texture. As the backs of several snakes and
serpents, elegantly remarkable in the *aspis*, and
the dart-snake, in the *chiasmus* and larger
decussations upon the back of the rattle-snake,
and in the close and finer texture of the *mater*
formicarum, or snake that delights in ant hills ;
whereby upon approach of outward injuries, they
can raise a thicker phalanx on their backs, and
handsomely contrive themselves into all kinds
of flexures : whereas their bellies are commonly
covered with smooth semicircular divisions, as

¹ Gom. de Sale.

CHAP. III. best accommodable unto their quick and gliding motion.

[41] This way is followed by nature in the peculiar and remarkable tail of the beaver, wherein the scaly particles are disposed somewhat after this order, which is the plainest resolution of the wonder of Bellonius, while he saith, with incredible artifice hath nature framed the tail or oar of the beaver: where by the way we cannot¹⁴⁷ but wish a model of their houses, so much extolled by some describers: wherein since they are so bold as to venture upon three stages, we might examine their artifice in the contignations, the rule and order in the compartitions; or whether that magnified structure be any more than a rude rectangular pile or mere hovel-building.

In the skins
and feet of
birds, the
scales of fish,
the skin of
man, &c.

[42] Thus works the hand of nature in the feathery plantation about birds. Observable in the skins of the breast¹, legs, and pinions of turkeys, geese, and ducks, and the oars or finny feet of water-fowl: and such a natural net is the scaly covering of fishes, of mullets, carps, tenches, &c., even in such as are excoriable and consist of smaller scales, as brets, soles, and flounders. The like reticulate grain is observable in some Russia leather. To omit the ruder figures of the *ostration*, the triangular or cunny-fish, or the pricks of the sea-porcupine.

[43] The same is also observable in some part of

¹ Elegantly conspicuous on the inside of the stripped skins of the dive-fowl, of cormorant, gosshonder [*goosander*], weasel, loon, &c.

8 the skin of man, in habits of neat texture, and therefore not unaptly compared unto a net: we shall not affirm that from such grounds the Egyptian embalmers imitated this texture, yet in their linen folds the same is still observable among their neatest mummies, in the figures of Isis and Osyris, and the tutelary spirits in the Bembine table. Nor is it to be overlooked how Orus, the hieroglyphick of the world, is described in a net-work covering, from the shoulder to the foot. And (not to enlarge upon the cruciated character of Trismegistus, or handed crosses¹, so often occurring in the needles of Pharaoh, and obelisks of antiquity), the *Statuæ Isiacæ*, and little idols, found about the mummies, do make a decussation of Jacob's cross, with their arms, like that on the head of Ephraim and Manasses, and this *decussis* is also graphically described between them.

This reticulate or net-work was also considerable in the inward parts of man, not only from the first *subtegmen* or warp of his formation, but in the netty *fibres* of the veins and vessels of life; wherein according to common anatomy the right and transverse *fibres* are decussated by the oblique *fibres*; and so must frame a reticulate and quincuncial figure by their obliquations, emphatically extending that elegant expression of Scripture "Thou hast curiously embroidered me," thou hast wrought me up after the finest way of texture, and as it were with a needle.

[44]

In many of the internal membranes of man and animals.

¹ *Cruces ansatæ*, being held by a finger in the circle.

- CHAP. III. Nor is the same observable only in some
 [45] parts, but in the whole body of man, which upon the extension of arms and legs, doth make out a square, whose intersection is at the genitals. To omit the fantastical quincunx in Plato of the first hermaphrodite or double man, united at the loins, which Jupiter after divided.
- [46] A rudimental resemblance hereof there is in the cruciated and rugged folds of the *reticulum*, or net-like ventricle of ruminating horned animals, which is the second in order, and culinarily called the honeycomb. For many divisions there are in the stomach of several 150 animals: what number they maintain in the *scarus* and ruminating fish, common description or our own experiment hath made no discovery; but in the ventricle of porpuses there are three divisions; in many birds a crop, gizzard, and little receptacles before it; but in cornigerous animals, which chew the cud, there are no less than four¹ of distinct position and office.
- [47] The *reticulum* by these crossed cells makes a further digestion in the dry and exsuccous part of the aliment received from the first ventricle. For at the bottom of the gullet there is a double orifice: what is first received at the mouth descendeth into the first and greater stomach, from whence it is returned into the mouth again; and after a fuller mastication,

¹ Μεγάλη κοιλία, κεκρύφαλος, ἐχίνος, ἡνυστρον.—Aristot. [*De Part. Anim.* iii. 14]. "Magnus venter, reticulum, omasus, abomasus."—Gaza.

and salivous mixture, what part thereof descendeth again in a moist and succulent body, slides down the softer and more permeable orifice, into the *omasus* or third stomach ; and from thence
 151 conveyed into the fourth, receives its last digestion. The other dry and exsuccous part after rumination by the larger and stronger orifice beareth into the first stomach, from thence into the *reticulum*, and so progressively into the other divisions. And therefore in calves newly calved, there is little or no use of the two first ventricles, for the milk and liquid aliment slippeth down the softer orifice, into the third stomach ; where making little or no stay, it passeth into the fourth, the seat of the *coagulum*, or runnet, or that division of stomach which seems to bear the name of the whole, in the Greek translation of the priest's fee, in the sacrifice of peace-offerings.

As for those rhomboidal figures made by the [48] cartilagineous parts of the weazand, in the lungs of great fishes, and other animals, as Rondeletius discovered, we have not found them so to answer our figure as to be drawn into illustration ; something we expected in the more discernable texture of the lungs of frogs, which
 152 notwithstanding being but two curious bladders not weighing above a grain, we found interwoven with veins, not observing any just order. More orderly situated are those cretaceous and chalky concretions found sometimes in the bigness of a small vetch on either side their spine ; which being not agreeable unto our order, nor

CHAP. III. yet observed by any, we shall not here discourse on.

[49] But had we found a better account and tolerable anatomy of that prominent jowl of the spermaceti whale than questuary operation¹, or the stench of the last cast upon our shore permitted, we might have perhaps discovered some handsome order in those net-like seas and sockets, made like honeycombs, containing that medical matter.

[50] Lastly, the incession or local motion of animals is made with analogy unto this figure, by decussative diametrals, quincuncial lines and angles. For, to omit the enquiry how butterflies and breezes move their four wings, how birds and fishes in air and water move by joint 153 strokes of opposite wings and fins, and how salient animals in jumping forward seem to arise and fall upon a square base,—as the station of most quadrupeds is made upon a long square, so in their motion they make a *rhomboides*; their common progression being performed diametrically, by decussation and cross advancement of their legs, which not observed, begot that remarkable absurdity in the position of the legs of Castor's horse in the Capitol. The snake which moveth circularly makes his spires in like order, the convex and concave spirals answering each other at alternate distances. In the motion of man the arms and legs observe this thwarting position, but the legs alone do move

The motion
of animals
quincuncial.

¹ 1652, described in our *Pseudo. Epidem.* edit. 3 [bk. iii. ch. 26].

quincuncially by single angles with some resemblance of a V measured by successive advancement from each foot, and the angle of indenture greater or less, according to the extent or brevity of the stride. CHAP. III.

154 Studious observators may discover more analogies in the orderly book of nature, and cannot escape the elegance of her hand in other correspondencies. The figures of nails and crucifying appurtenances, are but precariously made out in the *granadilla* or flower of Christ's passion: and we despair to behold in these parts that handsome draught of crucifixion in the fruit of the Barbado pine. The seminal spike of *phalaris*, or great shaking grass, more nearly answers the tail of a rattle-snake, than many resemblances in Porta. And if the man orchis¹ of Columna be well made out, it excelleth all analogies. In young walnuts cut athwart, it is not hard to apprehend strange characters; and in those of somewhat elder growth, handsome ornamental draughts about a plain cross. In the root of *osmond* or water-fern, every eye may discern the form of a half-moon, rainbow, or half the character of *pisces*. Some find Hebrew, Arabick, Greek, and Latin characters in plants; in a common one among us we seem to read *Aiain, Viviu, Lilit*. [51]

155 Right lines and circles make out the bulk of plants. In the parts thereof we find heliacal or spiral roundles, volutas, conical sections, circular pyramids, and frustums of Archimedes. And [52]

¹ *Orchis Anthropophora*, Fabii Columnæ.

Cruciform
appearances
in many
plants.

Various
analogies
traced in
vegetables,
animals, and
insects.

CHAP. III. cannot overlook the orderly hand of nature, in the alternate succession of the flat and narrower sides in the tender shoots of the ash, or the regular inequality of bigness in the five-leaved flowers of henbane, and something like in the calicular leaves of tutson. How the spots of *persicaria* do manifest themselves between the sixth and tenth rib. How the triangular cap in the stem or *stylus* of tulips doth constantly point at three outward leaves. That spicated flowers do open first at the stalk¹. That white flowers have yellow thrums or knops. That the nib of beans and peas do all look downward, and so press not upon each other. And how the seeds of many pappous or downy flowers locked up in sockets after a *gomphosis* or mortise-articulation, diffuse themselves circularly into branches of rare order, observable in *tragopogon* or goats-beard, conformable to the spider's web, and the *radii* in like manner 156 telarly interwoven.

[53] And how in animal natures, even colours hold correspondencies, and mutual correlations. That the colour of the caterpillar will show again in the butterfly, with some latitude is allowable. Though the regular spots in their wings seem but a mealy adhesion, and such as may be wiped away, yet since they come in this variety, out of their cases, there must be regular pores in those parts and membranes, defining such exudations.

[54] That Augustus² had native notes on his body

¹ Below.

² Suet. [*Vit. Aug.* lxxx.].

and belly, after the order and number in the CHAP. III.
stars of Charles' wain, will not seem strange
unto astral physiognomy, which accordingly
considereth moles in the body of man; or phy-
sical observators, who from the position of moles
in the face, reduce them to rule and corre-
spondency in other parts. Whether after the
like method medical conjecture may not be
raised upon parts inwardly affected; since parts
about the lips are the critical seats of pustules
[157] discharged in agues; and scrofulous tumours
about the neck do so often speak the like about
the mesentery, may also be considered.

The russet neck in young lambs¹ seems but [55]
adventitious, and may owe its tincture to some
contaction in the womb: but, that if sheep have
any black or deep russet in their faces, they
want not the same about their legs and feet;
that black hounds have mealy mouths and feet;
that black cows which have any white in their
tails, should not miss of some in their bellies;
and if all white in their bodies, yet if black
mouthed, their ears and feet maintain the same
colour;—are correspondent tinctures not ordi-
narily failing in nature, which easily unites the
accidents of extremities, since in some genera-
tions she transmutes the parts themselves, while
in the *aurelian metamorphosis* the head of the
canker becomes the tail of the butterfly. Which
is in some way not beyond the contrivance of
art, in submersions and inlays, inverting the

¹ To be observed in white young lambs, which afterwards
vanisheth.

CHAP. III. extremes of the plant, and fetching the root from the top, and also imitated in handsome columnary work, in the inversion of the extremes; wherein the capital, and the base, hold such near correspondency. 158

[56] In the motive parts of animals may be discovered mutual proportions; not only in those of quadrupeds, but in the thigh-bone, leg, foot-bone, and claws of birds. The legs of spiders are made after a *sesqui-tertian* proportion, and the long legs of some locusts, double unto some others. But the internodial parts of vegetables, or spaces between the joints, are contrived with more uncertainty; though the joints themselves, in many plants, maintain a regular number.

Proportions
in the motive
parts of
animals and
birds, and
obscurely in
plants.

[57] In vegetable composure, the union of prominent parts seems most to answer the *apophyses* or processes of animal bones, whereof they are the produced parts or prominent explantations. And though in the parts of plants which are not ordained for motion, we do not expect correspondent articulations; yet in the setting on of some flowers and seeds in their sockets, and the lineal commissure of the pulp of several seeds, may be observed some shadow of the harmony, 159 some show of the *gomphosis* or mortise-articulation.

[58] As for the *diarthrosis* or motive articulation, there is expected little analogy; though long-stalked leaves do move by long lines, and have observable motions, yet are they made by outward impulsion, like the motion of pendulous

bodies, while the parts themselves are united by some kind of *symphysis* unto the stock. CHAP. III.

But standing vegetables, void of motive articu- [59]
lations, are not without many motions. For, besides the motion of vegetation upward, and of radiation unto all quarters, that of contraction, dilatation, inclination, and contortion, is discoverable in many plants. To omit the rose of Jericho, the ear of rye, which moves with change of weather, and the magical spit, made of no rare plants, which winds before the fire, and roasts the bird without turning.

Even animals near the classis of plants, seem [60]
to have the most restless motions. The summer-worm of ponds and plashes, makes a long waving
160 motion, the hair-worm seldom lies still. He that would behold a very anomalous motion, may observe it in the tortile and tiring strokes of gnat-worms¹.

¹ Found often in some form of red maggot in the standing waters of cisterns in the summer.

CHAPTER IV.

On the various conveniences and delights of the quincunx. [1] AS for the delights, commodities, mysteries, 161 with other concernments of this order, we are unwilling to fly them over, in the short deliveries of Virgil, Varro, or others, and shall therefore enlarge with additional ampliations.

In the due proportion of earth allowed by it. [2] By this position they had a just proportion of earth, to supply an equality of nourishment. The distance being ordered, thick or thin, according to the magnitude or vigorous attraction of the plant, the goodness, leanness or propriety of the soil: and therefore the rule of Solon, concerning the territory of Athens, not extendible unto all; allowing the distance of six foot unto common trees, and nine for the fig, and olive.

[3] They had a due diffusion of their roots on all or both sides, whereby they maintained some proportion to their height, in trees of large 162 radication. For that they strictly make good their *profundeur* or depth unto their height, according to common conceit, and that expression of Virgil¹, though confirmable from the

¹ "Quantum vertice ad auras
Æthereas, tantum radice ad Tartara tendit."
[Æn. iv. 445-6.]

plane tree in Pliny, and some few examples, is not to be expected from the generality of trees almost in any kind, either of side-spreading, or tap-roots; except we measure them by lateral and opposite diffusions: nor commonly to be found in *minor* or herby plants; if we except sea-holly, liquorice, sea-rush, and some others.

They had a commodious radiation in their growth, and a due expansion of their branches, for shadow or delight. For trees thickly planted, do run up in height and branch with no expansion, shooting unequally or short, and thin upon the neighbouring side. And therefore trees are inwardly bare, and spring and leaf from the outward and sunny side of their branches.

In the room afforded for equal spreading of the trees, and the due circulation of air.

Whereby they also avoided the peril of *συνολεθρισμός* or one tree perishing with another, as it happeneth oftentimes from the sick *effluvioms* or entanglements of the roots falling foul with each other. Observable in elms set in hedges, where if one dieth, the neighbouring tree prospereth not long after.

In this situation, divided into many intervals and open unto six passages, they had the advantage of a fair perflation from winds, brushing and cleansing their surfaces, relaxing and closing their pores unto due perspiration. For that they afford large *effluvioms*, perceptible from odours, diffused at great distances, is observable from onions out of the earth, which though dry, and kept until the spring, as they shoot forth large and many leaves, do notably abate of their weight; and mint growing in glasses of water,

CHAP. IV. until it arriveth unto the weight of an ounce, in a shady place, will sometimes exhaust a pound of water. And as they send much forth, so may they receive somewhat in; for beside the common way and road of reception by the root, there may be a refection and imbibition from 164 without, for gentle showers refresh plants, though they enter not their roots, and the good and bad *effluvioms* of vegetables promote or debilitate each other. So *epithymum* and dodder, rootless and out of the ground, maintain themselves, upon thyme, savory, and plants whereon they hang; and ivy, divided from the root, we have observed to live some years, by the cirrous parts commonly conceived but as tenacles and hold-fasts unto it. The stalks of mint cropt from the root, stripped from the leaves, and set in glasses with the root end upward, and out of the water, we have observed to send forth sprouts and leaves without the aid of roots, and *scordium* to grow in like manner, the leaves set downward in water. To omit several sea plants, which grow on single roots from stones, although in very many there are side shoots and fibres, beside the fastening root.

[7] By this open position they were fairly exposed
 In the action of the sun. unto the rays of moon and sun, so considerable
 in the growth of vegetables. For though poplars, 165
 willows, and several trees be made to grow about the brinks of Acheron, and dark habitations of the dead; though some plants are content to grow in obscure wells, wherein also old elm pumps afford sometimes long bushy sprouts, not

observable in any above ground; and large CHAP. IV.
fields of vegetables are able to maintain their
verdure at the bottom and shady part of the
sea, yet the greatest number are not content
without the actual rays of the sun, but bend,
incline, and follow them, as large lists of solise-
quious or sun-following plants; and some ob-
serve the method of its motion in their own
growth and conversion, twining towards the
west by the south, as briony, hops, woodbine,
and several kinds of bindweed, which we shall
more admire, when any can tell us, they observe
another motion, and twist by the north at the
antipodes. The same plants rooted against an
erect north wall full of holes, will find a way
166 through them to look upon the sun; and in
tender plants from mustard seed, sown in the
winter, and in a pot of earth placed inwardly
against a south window, the tender stalks of
two leaves arose not erect, but bending towards
the window, nor looking much higher than the
meridian sun; and if the pot were turned they
would work themselves into their former declina-
tions, making their conversion by the east. That
the leaves of the olive and some other trees
solstitially turn, and precisely tell us when the
sun is entered Cancer, is scarce expectable in
any climate, and Theophrastus warily observes
it. Yet somewhat thereof is observable in our
own, in the leaves of willows and sallows, some
weeks after the solstice. But the great con-
volvulus, or white flowered bindweed, observes
both motions of the sun; while the flower twists

CHAP. IV. equinoctially from the left hand to the right, according to the daily revolution, the stalk twineth ecliptically from the right to the left, according to the annual conversion.

- [8] Some commend the exposure of these orders 167
unto the western gales, as the most generative and fructifying breath of heaven. But we applaud the husbandry of Solomon, whereto agreeth the doctrine of Theophrastus: "Arise, O north wind, and blow, thou south, upon my garden, that the spices thereof may flow out." For the north wind closing the pores, and shutting up the effluvia, when the south doth after open and relax them, the aromatical gums do drop, and sweet odours fly actively from them; and if his garden had the same situation, which maps and charts afford it, on the east side of Jerusalem, and having the wall on the west; these were the winds unto which it was well exposed.

In the
greatest
economy
of space.

- [9] By this way of plantation they increased the number of their trees, which they lost in quaternios and square orders, which is a commodity insisted on by Varro, and one great intent of Nature, in this position of flowers and seeds in the elegant formation of plants, and the former rules observed in natural and arti- 168
ficial figurations.

In mutual
shelter from
currents of
wind.

- [10] Whether in this order, and one tree in some measure breaking the cold and pinching gusts of winds from the other, trees will not better maintain their inward circles, and either escape or moderate their eccentricities, may also be

considered. For the circles in trees are naturally concentrical, parallel unto the bark, and unto each other, till frost and piercing winds contract and close them on the weather side, the opposite semicircle widely enlarging, and at a comely distance, which hindereth oftentimes the beauty and roundness of trees, and makes the timber less serviceable, whilst the ascending juice, not readily passing, settles in knots and inequalities; and therefore it is no new course of agriculture, to observe the native position of trees according to north and south in their transplantations. CHAP. IV.

The same is also observable under ground in [11] the circinations and spherical rounds of onions, wherein the circles of the orbs are oftentimes larger, and the meridional lines stand wider upon one side than the other; and where the largeness will make up the number of planetical orbs, that of Luna and the lower planets exceed the dimensions of Saturn, and the higher; whether the like be not verified in the circles of the large roots of briony and mandrakes, or why, in the knots of deal or fir, the circles are often eccentric, although not in a plane, but vertical and right position, deserves a further enquiry. 169

Whether there be not some irregularity of [12] roundness in most plants according to their position; whether some small compression of pores be not perceptible in parts which stand against the current of waters, as in reeds, bulrushes, and other vegetables toward the streaming quarter, may also be observed; and therefore such as are long and weak are com-

CHAP. IV. monly contrived unto a roundness of figure, whereby the water presseth less, and slippeth more smoothly from them, and even in flags of flat figured leaves, the greater part obvert 170 their sharper sides unto the current in ditches.

[13] But whether plants which float upon the surface of the water be for the most part of cooling qualities, those which shoot above it of heating virtues, and why? Whether *sargasso* for many miles floating upon the western ocean, or sea-lettuce and *phasganium* at the bottom of our seas, make good the like qualities? Why fenny waters afford the hottest and sweetest plants, as *calamus*, *cyperus*, and crowfoot, and mud cast out of ditches most naturally produceth arsmart? Why plants so greedy of water so little regard oil? Why since many seeds contain much oil within them, they endure it not well without, either in their growth or production? Why since seeds shoot commonly underground and out of the air, those which are let fall in shallow glasses, upon the surface of the water, will sooner sprout than those at the bottom; and if the water be covered with oil, those at the bottom will hardly sprout at all, we have not room to conjecture.

Effect of oil
and water on
the germina-
tion of seeds.

[14] Whether ivy would not less offend the trees in this clean ordination, and well-kept paths, might perhaps deserve the question. But this were a query only unto some habitations, and little concerning Cyrus or the Babylonian territory; wherein by no industry Harpalus could make ivy grow. And Alexander hardly found

Whether ivy
would do less
injury in
this arrange-
ment?

it about those parts, to imitate the pomp of CHAP. IV.
Bacchus. And though in these northern regions we are too much acquainted with one ivy, we know too little of another, whereby we apprehend not the expressions of antiquity, the splenetick medicine¹ of Galen, and the emphasis of the poet, in the beauty of the white ivy².

The like concerning the growth of misseltoe, [15]
which dependeth not only of the species, or kind of tree, but much also of the soil. And therefore common in some places, not readily found in others, frequent in France, not so common in Spain, and scarce at all in the territory of Ferrara; nor easily to be found where it is most required, upon oaks, less on
172 trees continually verdant. Although in some places the olive escapeth it not, requiting its detriment in the delightful view of its red berries; as Clusius observed in Spain, and Bellonius about Jerusalem. But this parasitical plant suffers nothing to grow upon it, by any way of art; nor could we ever make it grow where nature had not planted it, as we have in vain attempted by inoculation and incision, upon its native or foreign stock. And though there seem nothing improbable in the seed, it hath not succeeded by sation in any manner of ground, wherein we had no reason to despair, since we read of vegetable horns, and how rams horns will root about Goa³.

¹ Galen. *de Med. secundum loc.* [ix. 2. tom. xiii. p. 239.]

² "Hederâ formosior albâ."—[Virg. *Ecl.* vii. 38.]

³ Linschoten.

CHAP. IV. But besides these rural commodities, it

Great
variety
afforded by
this order.

[16] cannot be meanly delectable in the variety of figures, which these orders, open and closed, do make. Whilst every inclosure makes a rhombus, the figures obliquely taken a *rhomboides*, the intervals bounded with parallel lines, and each intersection built upon a square, affording 173 two triangles or pyramids vertically conjoined; which in the strict quincuncial order do oppositely make acute and blunt angles.

[17] And though therein we meet not with right angles, yet every rhombus containing four angles equal unto four right, it virtually contains four right. Nor is this strange unto such as observe the natural lines of trees, and parts disposed in them. For neither in the root doth nature affect this angle, which shooting downward for the stability of the plant, doth best effect the same by figures of inclination: nor in the branches and stalky leaves, which grow most at acute angles; as declining from their head the root, and diminishing their angles with their altitude; verified also in lesser plants, whereby they better support themselves, and bear not so heavily upon the stalk; so that while near the root they often make an angle of seventy parts, the sprouts near the top will often come short of thirty. Even in the nerves 174 and master veins of the leaves the acute angle ruleth; the obtuse but seldom found, and in the backward part of the leaf, reflecting and arching about the stalk. But why oftentimes one side of the leaf is unequal unto the other, as in

hazel and oaks, why on either side the master CHAP. IV.
vein, the lesser and derivative channels stand
not directly opposite, nor at equal angles,
respectively unto the adverse side, but those
of one part do often exceed the other, as the
walnut and many more, deserves another
enquiry.

Now if for this order we affect coniferous and [18]
tapering trees, particularly the cypress, which
grows in a conical figure; we have found a tree
not only of great ornament, but, in its essentials,
of affinity unto this order; a solid rhombus
being made by the conversion of two equicrural
cones, as Archimedes hath defined. And these
were the common trees about Babylon, and the
East, whereof the ark was made: and Alexander
175 found no trees so accommodable to build his
navy:—and this we rather think to be the tree
mentioned in the Canticles, which stricter
botanology will hardly allow to be camphire.

And if delight or ornamental view invite [19]
a comely disposure by circular amputations, as
is elegantly performed in hawthorns, then will
they answer the figures made by the conver-
sion of a rhombus, which maketh two concen-
trical circles; the greater circumference being
made by the lesser angles, the lesser by the
greater.

The cylindrical figure of trees is virtually con- [20]
tained and latent in this order; a cylinder or
long round being made by the conversion or
turning of a parallelogram, and most hand-
somely by a long square, which makes an equal,

CHAP. IV. strong, and lasting figure in trees, agreeable unto the body and motive part of animals, the greatest number of plants, and almost all roots, though their stalk be angular, and of many corners; which seem not to follow the figure of their seeds; since many angular seeds send forth round stalks, and spherical seeds arise 176 from angular spindles, and many rather conform unto their roots, as the round stalks of bulbous roots and in tuberous roots stems of like figure. But why, since the largest number of plants maintain a circular figure, there are so few with teretous or long round leaves? Why coniferous trees are tenuifolious or narrow-leaved? Why plants of few or no joints have commonly round stalks? Why the greatest number of hollow stalks are round stalks; or why in this variety of angular stalks the quadrangular most exceedeth, were too long a speculation. Meanwhile obvious experience may find, that in plants of divided leaves above, nature often beginneth circularly in the two first leaves below, while in the singular plant of ivy she exerciseth a contrary geometry, and beginning with angular leaves below, rounds them in the upper branches.

[21] Nor can the rows in this order want delight, as carrying an aspect answerable unto the *dipteros hypæthros*, or double order of columns open above; the opposite ranks of trees standing like pillars in the *cavedia* of the courts of famous buildings, and the porticoes of the *templa subdialia* of old; somewhat imitating the *peristylia* or cloister-buildings, and the *exedrae* of the 177

ancients, wherein men discoursed, walked, and exercised; for that they derived the rule of columns from trees, especially in their proportional diminutions, is illustrated by Vitruvius from the shafts of fir and pine. And, though the inter-arborescence do imitate the *aræostylos*, or thin order, not strictly answering the proportion of inter-columniations: yet in many trees they will not exceed the intermission of the columns in the court of the Tabernacle; which being an hundred cubits long, and made up by twenty pillars, will afford no less than intervals of five cubits.

Beside, in this kind of aspect the sight being [22] not diffused, but circumscribed between long parallels and the *ἐπισκίασμός* and adumbration from the branches, it frameth a penthouse over

Grateful to the eye by its regular green shade.

178 the eye, and maketh a quiet vision:—and therefore in diffused and open aspects, men hollow their hand above their eye, and make an artificial brow, whereby they direct the dispersed rays of sight, and by this shade preserve a moderate light in the chamber of the eye; keeping the pupilla plump and fair, and not contracted or shrunk, as in light and vagrant vision.

And therefore Providence hath arched and [23] paved the great house of the world, with colours of mediocrity, that is, blue and green, above and below the sight, moderately terminating the *acies* of the eye. For most plants, though green above ground, maintain their original white below it, according to the candour of their seminal pulp: and the rudimental leaves do

CHAP. IV. first appear in that colour, observable in seeds sprouting in water upon their first foliation. Green seeming to be the first supervénient, or above ground complexion of vegetables, separable in many upon ligature or inhumation, as succory, endive, artichokes, and which is also lost upon fading in the autumn.

[24] And this is also agreeable unto water itself, 179 the alimental vehicle of plants, which first altereth into this colour. And, containing many vegetable seminalities, revealeth their seeds by greenness; and therefore soonest expected in rain or standing water, not easily found in distilled or water strongly boiled; wherein the seeds are extinguished by fire and decoction, and therefore lasts long and pure without such alteration, affording neither uliginous coats, gnat-worms, *acari*, hair-worms, like crude and common water; and therefore, most fit for wholesome beverage, and with malt, makes ale and beer without boiling. What large water-drinkers some plants are, the canary-tree and birches in some northern countries, drenching the fields about them, do sufficiently demonstrate. How water itself is able to maintain the growth of vegetables, and without extinction of their generative or medical virtues, —besides the experiment of Helmont's tree, we have found in some which have lived six years in glasses. The seeds of scurvy-grass growing 180 in water-pots, have been fruitful in the land; and *assarum* after a year's space, and once casting its leaves in water, in the second

leaves hath handsomely performed its vomiting operation. CHAP. IV.

Nor are only dark and green colours, but [25] shades and shadows contrived through the great volume of nature, and trees ordained not only to protect and shadow others, but by their shades and shadowing parts, to preserve and cherish themselves : the whole radiation or branchings shadowing the stock and the root ; —the leaves, the branches and fruit, too much exposed to the winds and scorching sun. The calicular leaves inclose the tender flowers, and the flowers themselves lie wrapt about the seeds, in their rudiment and first formations, which being advanced, the flowers fall away ; and are therefore contrived in variety of figures, best satisfying the intention ; handsomely observable in hooded and gaping flowers, and the butterfly blooms of leguminous plants, the lower leaf closely involving the rudimental cod, and the alary or wingy divisions embracing or hanging over it.

But seeds themselves do lie in perpetual [26] shades, either under the leaf, or shut up in coverings ; and such as lie barest, have their husks, skins, and pulps about them, wherein the nib and generative particle lieth moist and secured from the injury of air and sun. Darkness and light hold interchangeable dominions, and alternately rule the seminal state of things. Light unto Pluto¹ is darkness unto Jupiter.

¹ "Lux Orco, tenebræ Jovi; tenebræ Orco, lux Jovi."—Hippocr. *de Dieta* [lib. i. § 5, tom. i. p. 633, ed. Kühn].

CHAP. IV. Legions of seminal ideas lie in their second chaos and Orcus of Hippocrates; till putting on the habits of their forms, they show themselves upon the stage of the world, and open dominion of Jove. They that held the stars of heaven were but rays and flashing glimpses of the empyreal light, through holes and perforations of the upper heaven, took off the natural shadows of stars¹; while according to better discovery the poor inhabitants of the moon have but a polary life; and must pass half their days 182 in the shadow of that luminary.

[27] Light that makes things seen, makes some things invisible; were it not for darkness and the shadow of the earth, the noblest part of the creation had remained unseen, and the stars in heaven as invisible as on the fourth day, when they were created above the horizon with the sun, or there was not an eye to behold them. The greatest mystery of religion is expressed by adumbration, and in the noblest part of Jewish types, we find the cherubims shadowing the mercy-seat. Life itself is but the shadow of death, and souls departed but the shadows of the living. All things fall under this name. The sun itself is but the dark *simulacrum*, and light but the shadow of God.

[28] Lastly, it is no wonder that this quincuncial order was first and is still affected as grateful unto the eye. For all things are seen quincuncially; for at the eye the pyramidal rays, from the object, receive a decussation, and so strike

This order is agreeable to the eye, as consonant to the angles observable

¹ J. Hevelii *Selenographia*.

a second base upon the *retina* or hinder coat, CHAP. IV.
 the proper organ of vision; wherein the pictures in the laws
 from objects are represented, answerable to the of optics and
 paper, or wall in the dark chamber; after the acoustics.
 decussation of the rays at the hole of the horny-
 coat, and their refraction upon the crystalline
 humour, answering the *foramen* of the window,
 and the convex or burning-glasses, which refract
 the rays that enter it. And if ancient anatomy
 would hold, a like disposure there was of the
 optick or visual nerves in the brain, wherein
 antiquity conceived a concurrence by decussa-
 tion. And this not only observable in the laws
 of direct vision, but in some part also verified in
 the reflected rays of sight. For making the
 angle of incidence equal to that of reflection,
 the visual ray returneth quincuncially, and after
 the form of a V; and the line of reflection being
 continued unto the place of vision, there ariseth
 a semi-decussation which makes the object seen
 in a perpendicular unto itself, and as far below
 the reflectent, as it is from it above; observable
 in the sun and moon beheld in water.

And this is also the law of reflection in moved [29]
 bodies and sounds, which though not made by
 decussation, observe the rule of equality between
 incidence and reflection: whereby whispering
 places are framed by elliptical arches laid side-
 wise; where the voice being delivered at the
 focus of one extremity, observing an equality
 unto the angle of incidence, it will reflect unto
 the focus of the other end, and so escape the
 ears of the standers in the middle.

CHAP. IV. A like rule is observed in the reflection of the

[30] vocal and sonorous line in echoes, which cannot therefore be heard in all stations. But happening in woody plantations, by waters, and able to return some words, if reached by a pleasant and well-dividing voice, there may be heard the softest notes in nature.

[31] And this not only verified in the way of sense, but in animal and intellectual receptions : things entering upon the intellect by a pyramid from without, and thence into the memory by another from within, the common decussation being in the understanding as is delivered by Bovillus¹. Whether the intellectual and phantastical lines be not thus rightly disposed, but magnified, diminished, distorted, and ill placed, in the mathematicks of some brains, whereby they have irregular apprehensions of things, perverted notions, conceptions, and incurable hallucinations, were no unpleasant speculation.

[32] And if Egyptian philosophy may obtain, the scale of influences was thus disposed, and the genial spirits of both worlds do trace their way in ascending and descending pyramids, mystically apprehended in the letter X, and the open bill and stradling legs of a stork, which was imitated by that character.

[33] Of this figure Plato made choice to illustrate the motion of the soul, both of the world and man : while he delivereth that God divided the whole conjunction length-wise, according to the figure of a Greek X, and then turning it about

Plato chose this figure to illustrate the motion of the soul.

¹ Car. Bovillus *De Intellectu*.

reflected it into a circle; by the circle implying CHAP. IV.
 86 the uniform motion of the first orb, and by the
 right lines, the planetical and various motions
 within it. And this also with application unto
 the soul of man, which hath a double aspect, one
 right, whereby it beholdeth the body, and objects
 without; — another circular and reciprocal,
 whereby it beholdeth itself. The circle declar-
 ing the motion of the indivisible soul, simple,
 according to the divinity of its nature, and
 returning into itself; the right lines respecting
 the motion pertaining unto sense and vegetation;
 and the central decussation, the wondrous con-
 nection of the several faculties conjointly in one
 substance. And so conjoined the unity and
 duality of the soul, and made out the three
 substances so much considered by him; that
 is, the indivisible or divine, the divisible or
 corporeal, and that third, which was the *systasis*
 or harmony of those two, in the mystical decus-
 sation.

And if that were clearly made out which [34]
 Justin Martyr took for granted, this figure hath *Apol. i. 60.*
 had the honour to characterize and notify our
 85 blessed Saviour, as he delivereth in that borrowed
 expression from Plato:—“*decussavit eum in*
universo,” the hint whereof he would have
 Plato derive from the figure of the brazen
 serpent, and to have mistaken the letter X for
 T. Whereas it is not improbable, he learned
 these and other mystical expressions in his
 learned observations of Egypt, where he might

¹ Ἐχίασεν αὐτὸν ἐν τῷ παντί.

CHAP. IV. obviously behold the mercurial characters, the handed crosses, and other mysteries not thoroughly understood in the sacred letter X; which, being derivative from the stork, one of the ten sacred animals, might be originally Egyptian, and brought into Greece by Cadmus of that country.

CHAPTER V.

188 **T**O enlarge this contemplation unto all the [1]
 mysteries and secrets accommodable unto On the
Mysteries
and Secrets
of this
Order.
 this number, were inexcusable Pythagorism,
 yet cannot omit the ancient conceit of five Five the
number of
justice,
called by
Plutarch the
divisive
number,
justly divid-
ing the
entities of
the world.
 surnamed the number of justice¹; as justly
 dividing between the digits, and hanging in
 the centre of nine², described by square numera-
 tion, which angularly divided will make the
 decussated number; and so agreeable unto
 the quincuncial ordination, and rows divided
 by equality, and just decorum, in the whole
 com-plantation; and might be the original of
 that common game among us, wherein the fifth
 place is sovereign, and carrieth the chief inten-
 tion; — the ancients wisely instructing youth,
 even in their recreations, unto virtue, that is,
 189 early to drive at the middle point and central
 seat of justice.

Nor can we omit how agreeable unto this [2]
 number an handsome division is made in trees

¹ δίκη.

² * * *

* * *

* * *

CHAP. V. and plants, since Plutarch, and the ancients have named it the divisive number ; justly dividing the entities of the world, many remarkable things in it, and also comprehending the general division of vegetables¹. And he that considers how most blossoms of trees, and greatest number of flowers, consist of five leaves, and therein doth rest the settled rule of nature ;—so that in those which exceed, there is often found, or easily made, a variety ;—may readily discover how nature rests in this number, which is indeed the first rest and pause of numeration in the fingers, the natural organs thereof. Nor in the division of the feet of perfect animals doth nature exceed this account. And even in the 190 joints of feet, which in birds are most multiplied, surpasseth not this number ; so progressionally making them out in many², that from five in the fore-claw she descendeth unto two in the hindmost ; and so in four feet makes up the number of joints, in the five fingers or toes of man.

- [3] Not to omit the quintuple section of a cone³, of handsome practice in ornamental garden-plots, and in some way discoverable in so many works of nature, in the leaves, fruits, and seeds of vegetables, and scales of some fishes ; so

¹ Δένδρον, Θάμνος, Φοῦγανον, Πάα, *Arbor, frutex, suffrutex, herba*, and that fifth which comprehendeth the *fungi* and *tubera*, whether to be named Ἀσχιον or γύμνον, comprehending also *conferva marina salsa*, and sea-cords, of so many yards length.

² As herons, bitterns, and long-clawed fowls.

³ *Elleipsis, parabola, hyperbole, circulus, triangulum.*

much considerable in glasses, and the optick CHAP. V.
doctrine; wherein the learned may consider the
crystalline humour of the eye in the cuttle-fish
and loligo.

He that forgets not how antiquity named this [4]
the conjugal or wedding number, and made it <sup>The conjugal
number.</sup>
the emblem of the most remarkable conjunction,
will conceive it duly applicable unto this hand-
some economy, and vegetable combination: and
191 may hence apprehend the allegorical sense of
that obscure expression of Hesiod¹, and afford
no improbable reason why Plato admitted his
nuptial guests by fives, in the kindred of the
married couple².

And though a sharper mystery might be [5]
implied in the number of the five wise and
foolish virgins, which were to meet the bride-
groom, yet was the same agreeable unto the
conjugal number, which ancient numerists made
out by two and three, the first parity and im-
parity, the active and passive digits, the material
and formal principles in generative societies.
And not discordant even from the customs of
the Romans, who admitted but five torches in
their nuptial solemnities³. Whether there were
any mystery or not, implied, the most generative
animals were created on this day, and had
accordingly the largest benediction. And under
a quintuple consideration, wanton antiquity con-
sidered the circumstances of generation, while

¹ πέμπτας, *id est, nuptias multas.*—Rhodig. [*Lect. Ant.*
xxii. c. x].

² Plato *de Leg.* 6.

³ Plutarch. *Problem. Rom.* i.

CHAP. V. by this number of five they naturally divided ~~10~~
the nectar of the fifth planet¹.

The char-
acter of
generation.

[6] The same number in the Hebrew mysteries and cabbalistical accounts was the character of generation², declared by the letter He, the fifth in their alphabet, according to that cabbalistical dogma; if Abram had not had this letter added unto his name, he had remained fruitless, and without the power of generation: not only because hereby the number of his name attained two hundred forty eight, the number of the affirmative precepts, but because, as in created natures there is a male and female, so in divine and intelligent productions, the mother of life and fountain of souls in cabbalistical technology is called *Binah*, whose seal and character was He. So that being sterile before, he received the power of generation from that measure and mansion in the archetype: and was made conformable unto *Binah*. And upon such involved considerations, the ten of Sarai was exchanged ¹⁹³ into five³. If any shall look upon this as a stable number, and fitly appropriable unto trees, as bodies of rest and station, he hath herein a great foundation in nature, who observing much variety in legs and motive organs of animals, as two, four, six, eight, twelve, fourteen, and more, hath passed over five and ten, and assigned them unto none, or very few, as the *Phalangium monstrosum Brasilianum* (*Clusii*

A stable
number, as
we never
find animals
with five
legs, nor
with ten.

¹ "oscula quæ Venus
Quinta parte sui nectaris imbuit."—[Hor. *Od.* i. 13.]
² Archang. *Dog. Cabal.* ³ *Jod* into *He*.

et Jac. de Laet. Cur. Poster. Americae Descript.), CHAP. V.

if perfectly described. And for the stability of this number, he shall not want the sphericity of its nature, which multiplied in itself, will return into its own denomination, and bring up the rear of the account. Which is also one of the numbers that makes up the mystical name of God, which consisting of letters denoting all the spherical numbers, ten, five, and six, emphatically sets forth the notion of Trismegistus, and that intelligible sphere, which is the nature of God.

- 194 Many expressions by this number occur in [7] Holy Scripture, perhaps unjustly laden with mystical expositions, and little concerning our order. That the Israelites were forbidden to eat the fruit of their new-planted trees, before the fifth year, was very agreeable unto the natural rules of husbandry; fruits being unwholesome and lash, before the fourth or fifth year. In the second day or feminine part of five, there was added no approbation. For in the third or masculine day, the same is twice repeated; and a double benediction inclosed both creations, whereof the one, in some part, was but an accomplishment of the other. That the trespasser¹ was to pay a fifth part above the head or principal, makes no secret in this number, and implied no more than one part above the principal; which being considered in four parts, the additional forfeit must bear the name of a fifth. The five golden mice had plainly their
195 determination from* the number of the princes.

¹ Lev. vi. [5].

CHAP. V. That five should put to flight an hundred might have nothing mystically implied; considering a rank of soldiers could scarce consist of a lesser number. Saint Paul had rather speak five words in a known, than ten thousand in an unknown tongue; that is, as little as could well be spoken; a simple proposition consisting of three words, and a complexed one not ordinarily short of five.

This number often to be observed in scriptural, medical, astrological, cabbalistical, magical examples.

[8] More considerables there are in this mystical account, which we must not insist on. And therefore, why the radical letters in the penta-teuch should equal the number of the soldiery of the tribes? Why our Saviour in the wilderness fed five thousand persons with five barley loaves; and again, but four thousand with no less than seven of wheat? Why Joseph designed five changes of raiment unto Benjamin; and David took just five pebbles out of the brook against the Pagan champion;—we leave it unto arithmetical divinity, and theological ex- 196 planation.

[9] Yet if any delight in new problems, or think it worth the enquiry, whether the critical physician hath rightly hit the nominal notation of *quinque*?¹ Why the ancients mixed five or three, but not four parts of water unto their wine; and Hippocrates observed a fifth proportion in the mixture of water with milk, as in dysenteries and bloody fluxes? Under what abstruse foundation astrologers do figure the good or bad fate

¹ *τέσσαρα ἕν κε* four and one, or five.—Scalig.

from our children, in good fortune¹, or the fifth house of their celestial schemes? Whether the Egyptians described a star by a figure of five points, with reference unto the five capital aspects², whereby they transmit their influences, or abstruser considerations? Why the cabbalistical doctors, who conceive the whole Sephiroth, or divine emanations to have guided the ten-stringed harp of David, whereby he pacified the evil spirit of Saul, in strict numeration do
 197 begin with the *perihypate meson*, or *si fa ut*, and so place the *tiphereth* answering *c sol fa ut*, upon the fifth string? or whether this number be oftener applied unto bad things and ends, than good in holy Scripture, and why? he may meet with abstrusities of no ready resolution.

If any shall question the rationality of that [10] magick, in the cure of the blind man by Serapis, commanded to place five fingers on his altar, and then his hand on his eyes? Why, since the whole comedy is primarily and naturally comprised in four parts³, and antiquity permitted not so many persons to speak in one scene, yet would not comprehend the same in more or less than five acts? Why amongst sea-stars nature chiefly delighteth in five points? And since there are found some of no fewer than twelve, and some of seven, and nine, there are few or none discovered of six or eight? If any shall enquire why the flowers of rue properly

¹ Ἀγαθὴ τύχη, *bona fortuna*, the name of the fifth house.

² Conjunct, opposite, sextile, trigonal, tetragonal.

³ Πρώταις, ἐπειταίς, κατάστασις, καταστροφή

CHAP. V. consist of four leaves, the first and third flower have five? Why, since many flowers have one 198 leaf or none¹, as Scaliger will have it, divers three, and the greatest number consist of five divided from their bottoms, there are yet so few of two? or why nature generally beginning or setting out with two opposite leaves at the root, doth so seldom conclude with that order and number at the flower? He shall not pass his hours in vulgar speculations.

[11] If any shall further query why magnetical philosophy excludeth decussations, and needles transversely placed do naturally distract their verticities? Why geomancers do imitate the quintuple figure, in their mother characters of acquisition and amission, &c., somewhat answering the figures in the lady or speckled beetle? With what equity chiromantical conjecturers decry these decussations in the lines and mounts of the hand? What that decussated figure intendeth in the medal of Alexander the Great? Why the goddesses sit commonly cross-legged 199 in ancient draughts, since Juno is described in the same as a veneficial posture to hinder the birth of Hercules? If any shall doubt why at the amphidromical feasts, on the fifth day after the child was born, presents were sent from friends, of polypuses and cuttle fishes? Why five must be only left in that symbolical mutiny among the men of Cadmus? Why Proteus in Homer, the symbol of the first matter, before he settled himself in the midst of his sea-

¹ *Unifolium nullifolium.*

monsters, doth place them out by fives? Why the fifth year's ox was acceptable sacrifice unto Jupiter? Or why the noble Antoninus in some sense doth call the soul itself a rhombus? He shall not fall on trite or trivial disquisitions. And these we invent and propose unto acuter enquirers, nauseating crambe verities and questions over-queried. Flat and flexible truths are beat out by every hammer; but Vulcan and his whole forge sweat to work out Achilles his armour. A large field is yet left unto sharper discerners to enlarge upon this order, to search out the *quaternios* and figured draughts of this nature, and (moderating the study of names, and mere nomenclature of plants), to erect generalities, disclose unobserved proprieties, not only in the vegetable shop, but the whole volume of nature; affording delightful truths, confirmable by sense and ocular observation, which seems to me the surest path to trace the labyrinth of truth. For though discursive enquiry and rational conjecture may leave handsome gashes and flesh-wounds; yet without conjunction of this, expect no mortal or dispatching blows unto error.

But the quincunx¹ of heaven runs low, and [12] 'tis time to close the five ports of knowledge. We are unwilling to spin out our awaking thoughts into the phantasms of sleep, which often continueth precogitations; making cables of cobwebs, and wildernesses of handsome groves.

¹ *Hyades*, near the horizon about midnight, at that time.

CHAP. V. Beside Hippocrates¹ hath spoke so little, and the oneirocritical² masters have left such frigid interpretations from plants, that there is little 201 encouragement to dream of Paradise itself. Nor will the sweetest delight of gardens afford much comfort in sleep; wherein the dulness of that sense shakes hands with delectable odours; and though in the bed of Cleopatra³, can hardly with any delight raise up the ghost of a rose.

[13] Night, which Pagan theology could make the daughter of Chaos, affords no advantage to the description of order; although no lower than that mass can we derive its genealogy. All things began in order, so shall they end, and so shall they begin again; according to the ordainer of order and mystical mathematicks of the city of heaven.

[14] Though Somnus in Homer be sent to rouse up Agamemnon, I find no such effects in these drowsy approaches of sleep. To keep our eyes open longer, were but to act our Antipodes. The huntsmen are up in America, and they are already past their first sleep in Persia. But who can be drowsy at that hour which freed 202 us from everlasting sleep? or have slumbering thoughts at that time, when sleep itself must end, and, as some conjecture, all shall awake again?

¹ *De Insomniis.*

² Artemidorus et Apomazar.

³ Strewed with roses.

NOTES

CRITICAL AND EXPLANATORY ON "HYDRIOTAPHIA."

Page iii. Thomas le Gros] Mentioned in Edward Browne's Journal (vol. i. p. 49), who paid a visit to Crostwick, and "had a great deal of discourse with Mr. Le Grosse, about his travails into France, the Low Countreys, and Italy, and about his pilgrimage to Loretto, and of the treasure which is in that place." Wilkin (in I) gives some account of his family. See also Blomefield's *Hist. of Norfolk*, xi. 8-11.

P. iii. whether *they are to be scattered*] *whither*, a plausible, but unnecessary alteration, first introduced without authority in F, has been adopted by Wilkin (I) and other modern editors.

P. iii. *the ruins of Pompeys*] So A, B, C, and quite correctly, as explained by the "Pompeios juvenes" in the note; *Pompey's*, D, E, which is adopted by Wilkin (I) and other modern editors; *Pompey*, F, G, without authority. If Sir T. B. had written *the Pompeys*, there would have been no doubt about the sense.

P. iv, note. *Little directly but sea*] Crostwick Hall is not twenty miles distant from the north coast of Norfolk. (Note by Wilkin in I.)

P. iv. *great Hippodrome urns*] So A, B, C, E; D has *the great*.

P. iv. *noblest pile among us*] Raynham Hall, in Norfolk, then recently built by Inigo Jones, 1630.

P. iv, note 3. *Sir Horatio Townshend*] Sir T. B. in his letters (vol. i. pp. 8, 14) mentions his being made a Lord, and also Lord Lieutenant of Norfolk, 1661. He is mentioned by

Clarendon in his *History* (bk. xvi. not far from the beginning) as having done good service to the Royal cause during the Commonwealth. He was made a Viscount, 1682, and died 1687.

P. v. *so many imperial faces*] Alluding probably (as Sir John Evans suggests) to his collection of Roman coins. The expression "imperial faces" occurs also, p. 21.

P. v. *antiquary's*] *antiquaries*, A to F; *-ries'*, G; *-ry's*, Wilkin (I), and other modern edd.

P. vii. *one handsome Venus*] For *Venus* it seems probable that we should read *Helen*, and that Sir T. B. was thinking of the story of Zeuxis as told by Cicero (*De Invent. Rhetor.* ii. 1), and by a slip of the pen wrote *Venus* instead of *Helen*. The story has been a favourite with English poets, and is told, as of a portrait of Venus and with modern applications, by Horace Walpole (*The Beauties*), Granville (*Lady Hyde*), Mallet (*Zephyr, or the Stratagem*), and also by Campbell (*Pleasures of Hope*).

P. vii. *can only behold, &c.*] A most awkward and obscure sentence, which would have been plainer if Sir T. B. had written, "*we can only behold . . . unto our predecessors . . . lie at our mercies.*"

P. vii. *defile not their ashes*] Alluding to Horace, *De Arte Poët.* v. 471. This Horatian phrase is quoted in Camden's *Remains*, p. 348 (1614), and from him both in Latin and English by Weever, *Funeral Monuments*, p. 47 (1631), whom Sir T. B. must probably have read.

P. viii, note. *Adamas de rupe veteri, &c.*] See J. H. Hofmanni *Lex. Univ.*, Lug. Bat. 1698.

P. 1. *to rake the bowels*] So A, C*; *rack*, C, D; *take*, B.

P. 2. *thousands of years*] This is one of the errata in C, which was first corrected in F; former edd. had *a thousand years*.

P. 2. *the earth be light upon them*] "*Sit tibi terra levis*" (note in F), words so often found in ancient epitaphs. See also Martial, *Epigr.* ix. 30. pen.

P. 5. *Numa, &c.*] The meaning would be more plainly expressed thus:—It was only because of a special clause in Numa's will that he was buried, and not burnt.

P. 5. *Remus was solemnly burnt*] All the edd. before Wilkin (I), and some after him, have *buried*, which is evi-

mentally wrong, as appears from the quotation from Ovid given in the note.

P. 5. *but of the Cornelian family*] Wilkin (I) has *but* the first of the Cornelian family, which makes the sentence plainer, but is without authority, and is not absolutely necessary.

P. 5. *crows were funerally burnt*] Referring to the curious story found in Pliny, *Hist. Nat.* x. 60 (43).

P. 5, note 4. These two quotations from the Twelve Tables are taken from Cicero, *De Legg.* ii. 23. See also Justinian's *Institutes*, Amster. 1642, pp. 553, 4. What Sir T. B. means by "tom. 2," and "tom. 4," is uncertain, as it is not known what edition he used.

P. 6. *the final pyre of all things*] In the *Rel. Med.* (pt. i. § 45) Sir T. B. quotes from Lucan (*Phars.* vii. 814), "*Communis mundo superest rogos*," in reference to the world's destruction by fire.

P. 7. *Thus I make myself immortal*] No such speech is given by Nicolaus Damascenus, nor perhaps by any other author. The expression in the epitaph is *ἐαυτὸν ἀπαθανάτισας*. See Strabo, *Geograph.* xv. 2.

P. 7. *the ancient Germans, who burned their dead*] So all the edd. except C, D, which have *buried*: it is one of the Errata corrected in C.

P. 8. *inclosure in glasses*] "Alexander the Great was said to have been buried in a glass coffin at Alexandria."—Wilkinson, *Ancient Egyptians*, vol. ii. p. 149, ed. Birch.

P. 9. *which happened to Ajax Oileus*] The line referred to is *Odyss.* iv. 511 *ὡς ὁ μὲν ἔνθ' ἀπόλωλεν ἐπεὶ πῖεν ἄλκυρὸν ὕδωρ*, and is perhaps spurious. The word *ἐξαπόλωλεν* is not found in the text of Homer, but in the line as quoted by Synesius, *Epist.* 4, who is referred to by Ant. Bosio, *Roma Sotteranea*, p. 34, ed. 1651. The passage in Hieron. Magius, referred to by Sir T. B., has not been found.

P. 10. *angels in the grave*] These are the two angels Munkar and Nekeer, "who examine all the dead, and torture the wicked, in their graves." (Lane's *Thousand and One Nights*, Introd. n. 21. See also ch. vi. n. 11.)

P. 12, note 1. *O Absalom, Absalom, Absalom*] So C*, but omitted by A to E, and also by Wilkin and most modern edd.; inserted in F, G.

P. 13. *They that . . . still credit the story of the Phoenix*] Alluding no doubt especially to Alexander Ross, who, in his *Arcana Microcosmi* &c., 1651, had, while attacking Sir T. B.'s *Vulgar Errors* (iii. 12), defended the existence of the Phoenix. A modern scholar has done the same. See *Notes and Queries*, 7th Ser., vol. vi. p. 481, vol. vii. p. 170.

P. 14. *The solemnities . . . delivered by authors*] The authors quoted by name by Sir T. B. are Casalius, Kirchmannus, and Perucci (see Index of Authors). Probably he also used Guthe-rius, *De Jure Manium*, Paris, 1615, and in one or other of these writers (perhaps especially Kirchmannus) he found most of the classical passages which he quotes.

P. 14. *the extraneous substances*] The objects enumerated are (as Sir John Evans points out, in R) characteristic of Saxon interments, not Roman.

P. 15. *That these were the urns of Romans, &c.*] "For the modern antiquary, a glance at the Plate on which figures of some of the urns are given, suffices to show that they were [not of Roman, but] of Saxon origin." (Sir John Evans, p. xx.)

P. 16. *his daughters*] The meaning would be clearer, if Sir T. B. had written—*his own* [two] *daughters*.

P. 17. *Now if the Icenī, &c.*] The etymology of this name has been much disputed. See Munford's *Local Names in Norfolk*, 1878. Wilkin's note is as follows:—"That is to say, if *iken* (as well as ἄγκων) signified an elbow, and thus, the Icenians were but 'men that lived in an angle or elbow,' then would the inhabitants of Norfolk have the best claim to the appellation, that county being most emphatically the *elbow* of Icenia. But, unfortunately, *iken* does *not* signify an elbow; and it appears that the Icenī derived their name from the river Ouse, on whose banks they resided, anciently called Iken, Yken, or Ycin. Whence, also, Ikenild-street, Iken-thorpe, Ikenworth." (Wilkin in I.)

P. 17. *Gammadims . . . or men that lived in an angle, &c.*] Alluding perhaps to a note on Ezek. xxvii. 11 by Grotius (whose *Annotationes* he was acquainted with), "Probabilis est eorum sententia qui intelligi putant habitatores Anconis Phœnices; nam Ancon est γαμαδ [gamad] cubitus."

P. 17. *not many . . . are now known*] So E; *many . . . are now known*, A, B, C; *many . . . are now unknown*, C*, which is

adopted by Wilkin (I) and others; *many . . . are not known*, D. It would seem that it was soon discovered that a negative was wanted, but it was carelessly inserted in the wrong place.

P. 18. *Ic. Duro. T.*] "Browne's account of the silver coins probably struck by the Iceni or Eceni is both interesting and correct. The coins reading DVRO are extremely rare." (Sir John Evans, in R, p. xix.)

P. 18, note 1. *Burntwood*] So A to E; the modern form of the name, *Brentwood*, first appears in F.

P. 18, note 4. *A piece of Maud the Empress*] "The coin here mentioned is hardly susceptible of identification, nor can it easily be imagined that any such inscription as *Elle n'a elle* should occur upon a coin." (Sir John Evans, in R.)

P. 19, note 1. *Brompton . . . Jorvalensis*] By a curious instance of carelessness both words are spelled wrong both in old and in modern edd.

P. 21. *no medal or emperor's coin enclosed*] A clear demonstration that these urns were not Roman. (Note in J.)

P. 21. *Macrobius*] That is, in the beginning of the fifth century. Kirchmann (*De Funer. Roman.* i. 2, p. 15) quotes the passage of Macrobius (*Saturn.* vii. 7), and in this part of the work has supplied Browne with almost every one of his authorities. (St. John, in J.)

P. 22. *the double sepulture*] Sir T. B. adopts the Vulgate translation of מַכְפֵּלָה *Macpelah*, which in the Authorized English (and also in the *Revised*) Version is taken for a proper name.

P. 22, note 1. *Det mihi, &c.*] This note, though given in C*, is omitted in A to E, and also in most modern edd.

P. 23. *Cynthia, the mistress of Propertius*] See *Eleg.* iv. 7.

P. 24. *Childerick the First*] Some say that this was not the grave of King Childerick: the ring bearing his name betrays evident signs of forgery: the letters not being of Gothic form, but modern Roman. (Note in J.)

P. 24. *three hundred golden bees*] "From this Buonaparte took the hint of covering his mantle, &c., with bees, a swarm of which is said to have been anciently the arms of France." (MS. note in Wilkin's copy of C.)

P. 24. *three hundred golden bees*] Swift mentions these in his "Letter from the Grand Mistress of the Female Free-Masons," &c.:—"You have perhaps read of a great number of

golden bees found in the coffin of a pagan king of France near Brussels many ages after Christ, which he had ordered should be buried with him in token of his having been a mason." (*Works*, vol. xii. p. 337, ed. 1755.)

P. 25. *Quintus* (*Cicero*), and *Scribonius Largus*] Both these imaginary works are mentioned by Sir T. B. in the *Musæum Clausum*, §§ 2, 3.

P. 25. *that letter from his brother Quintus*] Alluded to by Cicero, in *Epist. ad Q. Fratrem*, ii. 16.

P. 25. *king of Britons*] F is the first edition that reads *the Britons*, but Sir T. B. is fond of omitting the definite article. St. John (in J) has *Britain*.

P. 27. *Ansgarius*] This is one of the Errata in C, but A to F and most modern edd. have *Ausgurius*. Probably first correctly printed by Sir John Evans in R.

P. 27. *this country*] I (Wilkin) is the first ed. that reads *this county*, without authority or necessity. In F and G the word "Norfolk" is added as an explanatory note. Sir T. B. uses the word "country" in the same sense above, p. 15. l. penult.

P. 30. *Great persons*] This is one of the Errata in C*, which has been strangely overlooked in the old as well as most modern edd., which read *Great princes*.

P. 31. [*urns*] *with necks*] See Montfaucon, *Antiquity explained*, vol. v. plate 7 (ed. 1722).

P. 32. *and way*, C*, F, G; *a way*, A to E, and the modern edd., except R, which reads *and*, but omits *way*. The omission of the definite article before *way* is part of Sir T. B.'s style, as has been noticed before.

P. 32. *way preferred by Varro*] See Pliny, *Hist. Nat.* xxxv. 46.

P. 32. *wherein Severus lay*] It was supposed that the celebrated Portland Vase in the British Museum was this cinerary urn, though it is thought that it must have been made in the time of Augustus. It is now known to be made of glass.

P. 32. *solid tegument*] St. John points out (in J) that the "solid tegument," about which Sir T. B. seems to have been in doubt, was *gold*: ἄλλεγον ἐς χρυσέην φιάλην (*Iliad*, ψ 253); and the "covering" cast over the urn in the tent, was not, as he supposes, "a purple piece of silk," but a shroud of fine linen;

ἐανῶ λίτῃ κάλυψαν. He refers to Buttman's *Lexil.* in v. ἐανός, § 5.

P. 33. *sepulchral vessels containing liquors*] See in Casalius, *De profan. et sacris veterib. Ritib.* p. 256, a drawing of such vessels, and for an English example see Weever, *Funeral Monuments*, p. 30, ed. 1631.

P. 34, note 1. *About five hundred years*] It is believed that no such "fatal period" is to be found in Plato, and it is quite uncertain to what Sir T. B. alludes.

P. 34, note 2. *Opimianum*] All (?) previous edd., except D and J, have *Opiminianum*.

P. 40. *Gentile inscriptions precisely delivered the extent of men's lives*] Frequently down to the number of months and days: sometimes even to hours. Orellius, *Inscr. Lat. Select.*

No. 4626. VIX. ANN. XXVI. M.III. D.XXIV. H. X.

No. 4673. VIXIT. ANN. III. M.III. D.XII. H. VII.

P. 41. *Attica*] It is clear, from Sir T. B.'s reference to "Pausan. in Atticis," that he meant (and no doubt wrote) *Attica*, though all the edd. except St. John's (J) have *Africa*.

P. 42. *Plato's historian of the other world*] Alluding to the story of *Er* in the tenth book of the *Republic* (p. 614), who after death was restored to life, and gave an account of what he had seen in the other world.

P. 42. *How to keep the corpse seven days, &c.*] See Casalius, p. 258 sq.; Perucci, p. 81.

P. 43. *lamp, C** (and some copies of C); *lump* A to E; first corrected in F.

P. 43. *lamp of Galvanus*] This he sent to Licetus for his comments, which were given in a lengthy reply, dated Dec. 1645. The lamp is figured in the book and is copied in Montfaucon, *Antiquity explained*, vol. v. p. 157, English edition, 1722.

P. 43. *Galvanus*] Wilkin (I) reads [*Joan.*] *Galvanus*, without authority or necessity. C* directs a full point to be placed after *Galvanus*, but Wilkin (I) was the first editor who attended to the direction, the others having considered *Galvanus Marlianus* to be the names of one and the same man.

P. 43. *Marlianus*] This is one of the Errata in C, which has been overlooked in most subsequent edd., which have *Mar-*

ianus, and also *Martiano* in the note at the bottom of the page. In some copies of C, however, the text has *Marlianus*.

P. 43, note 1. *Which could not be burnt*] These words are placed in C* among the "Marginal Illustrations omitted," not among the "Errata" in the text. They were first noticed in F, where they are properly placed at the bottom of the page, as a note; Wilkin (I) has inserted them in the text. The story is mentioned by Pliny, *Hist. Nat.* vii. 2, p. 6, ed. Tauchn. (See below, p. 59, note, and p. 75, note.)

P. 43, note. These passages afford a good illustration of the way in which words and clauses have in the case of MSS. of the Old and New Testaments been introduced from the margin into the text.

P. 43. In one of Sir T. B.'s Common Place Books (MS. Sloane, 1843) are found the following lines, given by Wilkin, vol. iv. p. 377:—"One in the gout wishing for King Pyrrhus's toe, which could not be burnt at his funeral pyre.

"O for a toe, such as the funeral pyre
Could make no work on—proof 'gainst flame and fire;
Which lay unburnt when all the rest burnt out,
Such amianthine toes might scorn the gout;
And the most flaming blast the gout could blow
Prove but an *ignis lambens* to that toe."

P. 43. *Salamander's wool*] "A kind of asbestos or mineral flax," Johnson. Mentioned also by Bacon.

P. 45, note 6. *speran.* (not corrected in any (?) edition) is probably a mistake for *sperm.*, i. e. *sperm[aceti]*, and, if so, is meant as an example of "burning lights" drawn from animals, and "*alb[umen] ovor[um]*" an example of "medicines against burning."

P. 47. *in the days of Cuthred*] When Cuthbert, eleventh Archbishop of Canterbury (ob. 758), obtained a dispensation from the Pope. See Gervas. Dorobern. in Staveley's *Hist. of Churches in England*, ch. 15.

P. 47. *Christians dispute &c.*] If the passage referred to by Sir T. B. is Kirchmann, *De Funer.* lib. iii. cap. 8, p. 380, the discussion is among heathen, not among Christians.

P. 47. *Megarians*] Here Sir T. B. is wrong in confounding the Phœnician with the Megarian practice; for, while the former was to place their dead looking towards the

west—ἐπὶ δύσιν, Schol. Thucyd. i. 5. vol. v. 309, 381—the latter observed no certain rule: ὡς ἔτυχε τεθαμμένους, Ælian, *Var. Hist.* vii. 19. The same writer represents the Athenians as burying their dead with their faces towards the west, v. 14. Diog. Laert. in *Vit. Solon.* i. 2, states the contrary, and he is supported by the Scholiast on Thucydides. (St. John in J.)

P. 48. *gnawed*] *knav'd* A to E, and some modern edd., but *gnawed* is one of the corrections in C, and is adopted first in F, and cannot be set aside without absolute necessity.

P. 48. *hair, &c.*] This assertion of the durability of human hair has been corroborated by modern experiment. M. Pictet, of Geneva, instituted a comparison between recent human hair and that from a mummy brought from Teneriffe, with reference to the constancy of those properties which render hair important as a hygrometrick substance. For this purpose, hygrometers, constructed according to the principles of Saussure, were used; one with a fresh hair, the other from the mummy. The results of the experiments were, that the hygrometrick quality of the Guanche hair is sensibly the same as that of recent hair.—*Edin. Philos. Journal*, xiii. 196. (Wilkin in I.)

P. 48. *In an hydropical body, &c.*] This substance was afterwards found in the cemetery of the Innocents at Paris, by Fourcroy, and became known to the French chemists under the name of *adipocire*. Sir Thomas is admitted to have been the first discoverer of it. (Wilkin in I.)

P. 48. *Castile soap*] Spelled in the old edd. A to F, *castle-soap*.

P. 49. *metamorphosis of Ortelius*] In the extreme east of his map of Russia there is a picture of a tribe of natives supposed to be turned to stone “stupenda quadam *metamorphosi*.” Wilkin in his note describes the wrong picture. The map is dated 1562, and is by Antonius Jenkensonus Anglus; who says, “evenit hoc prodigium annis circiter 300 retro clapsis.”

P. 50. *Dante's characters*] The same conceit, with the expression “the starved characters of Dante,” is found in Sir T. B.'s *Letter to a Friend*, sect. 9.

P. 50, note 2. *That part, &c.*] So C*, but om. A to E, and first found in F.

P. 50, note 1. *For their extraordinary thickness*] So C*, but om. A to E, and first found in F.

P. 51. *salve*, A to E; *solve*, Wilkin in I, without authority or necessity. See Glossarial Index.

P. 54. *The soul had wings in Homer*] $\Psiυχὴ δ', ἥτ' ὄνειρος ἀποπταμένη πεπόνηται$ (*Odyss.* xi. 222).

P. 56, note 1. *Vale, vale, &c.*] These words are quoted (and not quite correctly, as St. John points out,) from Servius, on Virgil, *Æn.* iii. 68 (from note in J).

P. 56. *that tree*, C, D, F; *that he*, A, B; *that it*, E, which is adopted by Wilkin (I).

P. 58. *Mahometans . . . are carried forth with their heads forward*] This practice is still continued, and is mentioned by Mr. Lane in his notes to *The Thousand and One Nights*, ch. vi. n. 11.

P. 59, note 2. *At least, &c.*] This note, which is given in C*, first appears in F, being omitted in A to E, as in some modern edd. Sir John Evans (R) has inserted the words in the text. (See above, p. 43, note, and below, p. 75, note.)

P. 60. *self-killers*] Hence Menelaus and Agamemnon, in Sophocles, oppose the burial of Ajax, who, in a fit of frenzy, had slain himself. *Ajax*, v. 1047 ff. (St. John in J.)

P. 60. *Tartarus*, C, D, F; *Tartara's*, A, B, E.

P. 60. *bottomless pit of Plato*] So A, E; B, C, D have *Pluto*.

Pp. 60, 61, 63. *the bottomless pit of Plato, the infernal house of Plato, and Plato's den*, all refer to the story of *Er*, mentioned above, ch. iii. § 14.

P. 61. *unto eight or ten bodies of men to add one of a woman, &c.*] See Plutarch, *Symposiaca*, lib. iii. quæst. 4.

P. 61. *infernal house of Plato*] So A, C*, E; B, C, D have *Pluto*.

P. 61. *whercin cold makes a great part of their tortures*] No such passage (it is believed) is to be found in Plato. Probably Sir T. B. was thinking of the story of *Melissa*, *Periander's* wife, as told by Herodotus, v. 92. § 29.

P. 61. *female ghosts, &c.*] The passages in Homer and Virgil referred to by Sir T. B. in this and the following page will be found in *Odyss.*, xi. 84, 90, 329, 444, 488, 563, 605; xxiv. 6; and *Æneid*, vi. 148, 494, 790.

P. 61, note. These two notes are found in C*, but not in A to E.

P. 62. *Morta*] One of the *Parcæ*. See Aul. Gell. iii. 16, 11.

P. 62. *cannot well speak*, A, B, C*, E; *cannot we speak*, C; *cannot they speak*, D.

P. 62. *The departed spirits, &c.*] Cary quotes this passage in illustration of Dante, *Inferno*, canto x, where the spirits are ignorant of things present, and Cavalcanti (like Agamemnon) enquires about his son. Cary also refers to Darius in *Æschylus* (*Pers.* 734) enquiring about his son Xerxes.

P. 63. *A dialogue, &c.*] Such a dialogue it appears probable that Sir T. B. contemplated writing himself; but it is uncertain whether he ever did so. See Wilkin's edition, vol. ii. p. 58; vol. iii. p. 486; and vol. iv. pp. 379, 469.

P. 63. *Pythagoras escapes in the fabulous Hell of Dante*] Pythagoras is not mentioned at all by Dante; perhaps *escapes* means *escapes notice altogether*. Or, the meaning may be that he *escapes condemnation*.

P. 65. *fearful*] Almost all edd., both old and modern, insert *and after fearful*, though in the "Errata" of C it is directed to be deleted.

P. 66. *the Immortality of Plato*] viz. the *Phædo*. See Plutarch, *Life of Cato of Utica*, § 68. Compare the story of Cleombrotus the Ambraciot, in the epigram of Callimachus (*Anthol. Gr.* vii. 471; Cicero, *Tusc. Disp.* i. 34).

P. 70. *If we begin to die when we live*] Alluding probably to Manilius, *Astron.* lib. iv. l. 16, "*Nascentes morimur.*"

P. 70. *work for Archimedes*] who in his *Arenarius* gives directions for the numbering of the sea-sand.

P. 70. *our days . . . make not one little finger*] That is, a hundred years is naturally the extreme length of human life. Compare *Vulgar Errors*, bk. v. ch. 20, p. 67, ed. Bohn; bk. vi. ch. 6, p. 142.

P. 71. *time hath no wings unto it*] i.e. *comparable unto it*. So in *Rel. Med.* pt. i. § 44, p. 69, "There is no torture to the rack of a disease": and pt. ii. § 3, p. 99, "There is no reproach to the scandal of a story."

P. 71. *content . . . never to have been*] As Sophocles, *Ædip. Colon.* 1225 μὴ φῶναι τὸν ἅπαντα νικᾷ λόγον.

P. 73. *the prophecy of Elias*] This refers to a tradition of

the "house [school] of Elijah," mentioned in the Talmud. See *Rel. Med.* p. 72, and note, p. 274.

P. 75. *Hippocrates' patients*] In some of the treatises of the Hippocratic collection we find rough notes of medical cases with the names and addresses of the patients given: e.g. *Epid.* i. § 13, "Silenus lived on the Broadway, near the house of Evalcidas," &c.; "Cleonactides, who was lodged above the Temple of Hercules," &c. "Melidia, who lodged near the Temple of Juno," &c. (pp. 371, 375, 381, Adams's Translation).

P. 75, note 4. *which men show, &c.*] Given in C*, among the "Marginal Illustrations omitted," but first noticed in F. Inserted in the text by Sir John Evans (R). See above, p. 59, note.

P. 76. *Without the favour of the everlasting register*] These words are placed after *Agamemnon* (a few lines above) in A to E, and in some modern editions, though C* plainly directs them to be put after *time*. F is the first edition that attends to this direction. It is a little uncertain whether the words ought to form the end of one sentence, or the beginning of the next. Probably Sir John Evans (R) is the only editor who takes the former view, which upon the whole seems the more likely to be correct, as otherwise C* would have said, "Without" [*with a large W*] &c. to come in *before* "The first," &c.

P. 76, note 1. These words "Before the flood" are directed in C*, D* to be put among the "Marginal Illustrations," not in the text. Crossley (G) was the first editor who attended to the direction; for in F this and the following note are stupidly jumbled together. Wilkin (I) and some others insert them in the text.

P. 77, note 2. *Euripides*] The passage referred to is probably the following from the lost drama, *Polyidus*:—

τίς δ' οἶδεν εἰ τὸ ζῆν μὲν ἐστὶ καθανεῖν,
τὸ καθανεῖν δὲ ζῆν κάτω νομίζεται;

"The sublime guess of Euripides, which was greeted with ignoble ridicule by the comic poets, has become an assured truth in Christ." (Bp. Lightfoot, on *Philippians*, i. 22.) See also the note on Euripides, *Hippolytus* 191-2, ed. Monk.

P. 77. *the brother of death*] viz. *sleep*, both being (according to the mythological genealogy of the Greeks) the children of *Night* (Hesiod, *Theog.* 123, 212, 758). Sir T. B. uses the same

expression at the beginning of the fragment on Dreams. See also the *Letter to a Friend*, § 7.

P. 77. *Diuturnity, &c.*] Wilkin (I) prints the following similar passage from *MS. Sloan. 1848*, fol. 194: "Large are the treasures of oblivion, and heaps of things in a state next to nothing almost numberless; much more is buried in silence than recorded, and the largest volumes are but epitomes of what hath been. The account of time began with night, and darkness still attendeth it. Some things never come to light; many have been delivered; but more hath been swallowed in obscurity and the caverns of oblivion. How much is as it were *in vacuo*, and will never be cleared up, of those long living times when men could scarce remember themselves young; and men seem not to us ancient but antiquities, when they [lived] longer in their lives than we can hope to do in our memories; when men feared not apoplexies and palsies after seven or eight hundred years; when living was so lasting that homicide might admit of distinctive qualifications from the age of the person, and it might seem a lesser injury to kill a man at eight hundred than at forty, and when life was so well worth the living that few or none would kill themselves."

P. 77. *no unhappy stupidity*] The word *unhappy* is omitted in C, D, but in no other ed.

P. 77, note 3. *According to, &c.*] This note, which is given among the "Marginal Illustrations" in C*, D*, first appears in its proper place in F.

P. 78. *Mummy is become merchandise*] Alluding to its use as a drug, which appeared in the London Pharmacopœia as late as 1721.

P. 79. *All others have a dependent being, and within the reach of destruction*] These words are included in a parenthesis in D, but in no other edition. In order to avoid the inconsistency of putting together the words "within the reach of destruction, which is the peculiar of that necessary Essence that cannot destroy itself," Crossley (G) transposed the clause "all others . . . destruction" to the end of the sentence, after "power of itself," without authority or notification to the reader. This alteration was adopted by Wilkin (I) and some other modern editors, but without necessity, for by enclosing the words

within a parenthesis (as in D), though the sentence is awkward and hardly grammatical, yet the apparent contradiction is removed.

P. 80. *But man is a noble animal, &c.*] Southey (as Wilkin points out) quotes this striking passage in the opening of his *Colloquies*, with the following note:—"I suspect that Sir Thomas Brown wrote *infamy*, a word which, though not regularly formed, would be more in his manner, and more in place. Anthony Wood speaks in his own Life (p. 190) of 'a young heir who put his father's papers to *infamous* uses.'"

P. 81, note 1. *According to, &c.*] This note is among the Addenda in C*, D*, but was first printed as a note in F. It is omitted in some modern edd.

P. 81. *we shall not all die, &c.*] See Bp. Wordsworth's *Commentary, in loco*, for a note upon the variations in the readings of this text,—1 Cor. xv. 51. Wiclif, following the Vulgate, translates the passage, "and alle we schulen rise agen, but not alle we schulen be chaungid."

NOTES

CRITICAL AND EXPLANATORY ON "THE GARDEN OF CYRUS."

Page ix. This Epistle Dedicatory is in the earlier editions placed after that to Thomas Le Gros, without any very obvious reason: they were first separated in E.

P. ix. NICHOLAS BACON] This gentleman was the grandson of Sir Nicholas Bacon, who was created premier baronet of England in 1611, and was himself created a baronet in 1661. He was a man of letters and a patron of learning; it was partly his invitation which induced Sir T. B. to settle at Norwich, and it was to him that some of the *Miscellany Tracts* were addressed. He died in 1666. (Abridged from Wilkin's notes, vol. i. p. lx; vol. iii. pp. 381, 384.)

P. ix. *Dioscorides . . . in his march about with Antonius*] Dioscorides, in the Preface to his work *De Materia Medica* (p. 4, ed. Sprengel), merely says of himself that he had led a military life and had travelled much; but it is probable that Sir T. B. (after Suidas) confounded together two physicians of the same name. See Smith's *Dict. of Greek and Roman Biogr.*

P. x. *old in those singularities*] Wilkin (I) has *hold*, which must be a mere typographical error, and which is only noticed because it is repeated in Bohn's reprint (K).

P. xi. *any other diagrams, &c.*] That is, no illustrations, except the frontispiece representing the quincunx, and the *battalia*, on p. 114.

P. xii. *Cato seemed to dote upon cabbage*] Pliny, *Hist. Nat.* xix. 41, 1; xx. 33.

P. xii. *That we conjoin, &c.*] Alluding to his joining this tract to his "Hydriotaphia." (Note in F.)

P. xii. *in flowers, C*, D; with flowers, E; flowers, A, B, C.*

P. xii. *that this should succeed the other*] The first edition of the two "Discourses" contains the *Hydriotaphia* and *Garden of Cyrus*, 'placed in the order which is followed in this volume.

P. xiii. *arcana*, D; *arcana's*, A, B, C, E.

P. 91. *if made by Semiramis*] Pliny, *Hist. Nat.* xix. 19, 1.

P. 92. *with many conceptions elevated, &c.*] Wilkin (I) extracts from MS. Sloan. 1847 the following passage, evidently intended for this work: "We are unwilling to diminish or loose the credit of Paradise, or only pass it over with [the Hebrew word for] *Eden*, though the Greek be of a later name. In this excepted, we know not whether the ancient gardens do equal those of later times, or those at present in Europe. Of the gardens of Hesperides, we know nothing singular, but some golden apples. Of Alcinous his garden, we read nothing beyond figgs, apples, and olives; if we allow it to be any more than a fiction of Homer, unhappily placed in Corfu, where the sterility of the soil makes men believe here was no such thing at all. The gardens of Adonis were so empty that they afforded proverbial expression, and the principal part thereof was empty spaces, with herbs and flowers in pots. I think we little understand the pensile gardens of Semiramis, which made one of the wonders of it [Babylon], wherein probably the structure exceeded the plants contained in them. The excellency thereof was probably in the trees, and if the descension of the roots be equal to the height of trees, it was not [absurd] of Strebæus to think the pillars were hollow that the roots might shoot into them."

P. 92. *famous Syrian king of Diodorus*] *Biblioth. Hist.* ii. 10.

P. 92. *the very name of Paradise, &c.*] פֶּרֶדִּים in *Eccles.* ii. 5, and *Song of Solomon*, iv. 13; a word which "is the Zend *pairidaēza*, properly an enclosure." (Professor Driver, *Introduction to the Literature of the Old Testament*, p. 422 n.)

P. 92. *a garden and a buckler*] גֻּן, מִגָּן.

P. 94. *King Attalus lives for his poisonous plantations*] Plutarch, *Demetrius*, 25. He is referred to also in *Religio Medici*, p. 209.

P. 94. *many of the ancients do poorly live in the single names*

of vegetables] Referring probably to names such as Hyacinth, Iris, Narcissus, Jasonian (from Jason), and "Helenium ab Helena natum" (Pliny, *Hist. Nat.* xxi. 91).

P. 94. *in use before by Varro*] "Si sata sunt in quincuncem." *De Re Rust.* I. vii. 2.

P. 94. *doubled at the angle*, C*, D, E; *doubted*, A, B, C. Wilkin (I) has *double*, probably a typographical error, which is repeated in Bohn's reprint (K).

P. 95. *rectangular*] One of the Errata in C, first corrected by Wilkin (I); *regular*, A to F.

P. 95. *pattern in the sky*] Referring to the well-known story of the vision of Constantine the Great, when he was commanded "ut cœleste signum Dei notaret in scutis" (Lactantius, *De Mort. Pers.* 44).

P. 96. *we should have*, A to E; *shall* seems an unnecessary correction by Wilkin (I), repeated in Bohn's reprint (K).

P. 97. *character of Venus*] ♀ the astronomical sign of the planet Venus.

P. 98. *the brazen table of Bembus*] Cf. "Bembine Table," p. 148. In Spineto's *Hieroglyphics* it is stated that "This table, which is of bronze, five feet long and three feet wide, is divided into several partitions, filled with all sorts of hieroglyphics; and this strange mixture alone, independent of other reasons equally strong, seems to establish the fact that it is a monument of a modern date, fabricated at Rome towards the latter end of hieroglyphical writing, by some person who knew but little about the science, but who wished to exhibit some of the strange doctrines, rites, and ceremonies, which had been introduced in the mysteries of Isis, when they were established in Rome, but very different from those once celebrated in Egypt." The tablet passed from Cardinal Bembo's collection to the Duke of Mantua, and is now in the Museum at Turin. It is commonly known as the Isiac Table.

P. 99. *the emphatical word*] This is ὄψαρος. See *Odyss.* vii. 112.

P. 99. *Ulysses . . . was promised by his father forty fig-trees, &c.*] *Odyss.* xxiv. 310-11.

P. 99. *deducible from Theophrastus, &c.*] *Hist. Plant.* iv. 4, 8.

P. 100. *Saturn . . is discovered to be Noah*] This opinion was maintained by Bochart, in his *Geographia Sacra*, published 1646. He considers the identity so firmly established as not to admit the possibility of a doubt.

P. 100. *his three sons*, C*, D, E; *stones*, A, B, C.

P. 101. There is an important variety of reading here. A, B, C have *to fix such . . . no higher*, which is neither sense nor grammar; D has *to fix such . . . to higher*, which is as bad; F has *to fix such . . . to no higher*, which gives the right sense, but is unauthorized; E (which has a certain amount of authority, as being the first edition published after the author's death) has *to fix to such . . . no higher*, which gives a good sense, and is rightly adopted by Wilkin (I).

P. 101. *the first sin of the new world*] Drunkenness, as being the first offence recorded in Holy Scripture after the Deluge.

P. 108, note 3. *the larger sort of medals*] Additional note in C*; first used by Wilkin (I).

P. 109. *chapters of the pillars*, C*, D; *chapters*, A, B, C, E.

P. 109. *the rushy labyrinths of Theocritus*] *Idyll.* xxxi. 11.

P. 110. *although why Vulcan bound them, &c.*] The hidden meaning of the story is expounded by Leo Hebræus, in "*De Amoris Natura et Essentia*," *Dial.* ii. p. 420; a work published with the treatise of Archangelus quoted on p. 192, *infra*.

P. 110. *vaired*, A; *varied*, B to E. The reading of A has been restored, as probably correct.

P. 112. *the chet mat*, A, B, C, E, F; *chec-mate*, D.

P. 112. *which might continue*] One of the Errata in C, first corrected by Wilkin in I, all previous editions having "*and might continue*."

P. 112. *played at Penelope*, A, B, E; *at* omitted by C, D.

P. 112. note 2. *Plato*] This reference is omitted by Wilkin (I) and in Bohn's reprint (K), though found in A to F.

P. 113. *illustrable from Aristotle*] *Quæst. Mechan.* xxii.

P. 114. *the battle of Africa*] This was Zama; see the account in Livy, xxx. 33.

P. 116. *before the first rank*] One of the Errata in C; *rank* omitted in A to E.

P. 116. *the famous pillars of Seth*] See Josephus, *Antiq.* i. 2;

and Sylvester's *Du Bartas, Weeks and Works: 2nd Week: The Columns.*

P. 116, note 2. *obelisks, &c.*] This note was added in C, but was not inserted in any following edition before Wilkin's (I).

P. 119. *seven hundred, C**; *five hundred, A to E.*

P. 121. *music of the spheres*] Pliny, *Hist. Nat.* ii. 20; Aristotle, *de Cælo*, ii. 9; Porph. in *Harm. Ptol.* 4. 257.

P. 121. *the sevenfold pipe of Pan*] Virgil, *Ecl.* ii. 32-38. Sometimes there were nine reeds; Theocritus, *Idyll.* viii. 18-22.

P. 122. *the head of Taurus, C**; *neck, A to E.*

P. 123. *jacea pinca, A, B, C**; *jacea pinan, C, D, E.*

P. 124. *may find the seraglio of Solomon*] This must refer to the 700 wives and 300 concubines in 1 Kings xi. 3.

P. 124, note 3. *There being a single maggot, &c.*] This note is among the Additions in C, D, but is first inserted in F.

P. 125. *mercury wild, D, E*; *weld, A, B, C, F.*

P. 127. *observable in furze*] *furre, A, B, C, D*; *furr, E*; first corrected *furze* in F.

P. 127. *upon pollard oaks and thorns*] This note first appears in I, though it is one of the Additions in C, D.

P. 130, *roots and sprouts*] *and sprouts om. A to E*: one of the Errata in C.

P. 132. *will root at that end*] Wilkin (I) has *the end*, which is continued in Bohn's reprint (K)—without authority.

P. 133. *seminal powers, C*, F*; *seminal pores, A to E.*

P. 135. *These and more, &c.*] This note is among the Additions in C, D, but is first given in F.

P. 135. *pill, woolley tuft*] *pill, C, C**; *dill, A, B, D, E*; *bill, F.*

P. 135. *In a large . . . trees*] This sentence is omitted in A to E. It is inserted in F, in accordance with the Errata in C; but is put as a note by Wilkin (I), and so continued in Bohn's reprint (K).

P. 137. *channelled side*] This is altered, needlessly, to *channel*, by Wilkin in I, and in Bohn's reprint (K).

P. 139. *closing leaves, C*, D*; *dosing leaves, A, B, C, E.*

P. 139. *which exceed not five*] This note is among the Additions in C, D, but is first found in E.

P. 140. *the five brethren of the rose*] Alluding to a rustic rhyme:—

“On a summer’s day, in sultry weather
Five brethren were born together;
Two had beards, and two had none,
And the other had but half a one.”

(Note in I.) See also *Notes and Queries*, 6th Ser. iii. 466, iv. 73.

P. 141. *fifth touch*, C*; *first touch*, A to E.

P. 142. *But the bramble*, C*; *bryar* or *briar*, A to E.

P. 142. *Delphinium*, C*; *Gallitricum*, A to E.

P. 145. *a pliant fancy*, A, B, C*, E; *plain*, C, D.

P. 147. *in some Russia leather*] This grain is, however, artificially produced, and not as the author seems to suppose, natural. (Note in I.)

P. 148. *Jacob’s cross . . . Manasses*] Referring to the position of Jacob’s hands in blessing the two sons of Joseph, as narrated in Gen. xlviii. 13–14. For a summary of the patristic opinions upon this subject, see Bp. Wordsworth’s *Commentary*, in *loc.*

P. 148, note 1. *Cruces ansatæ*, &c.] This note is one of the Additions in C, D.

P. 149. “*Thou hast curiously embroidered me*”] Ps. cxxxix. 15. See also Exod. xxvi. 1, 36; xxxv. 35.

P. 149. *the fantastical quincunx in Plato*] *Symposium*, 189–191.

P. 150, note 1. *Μεγάλη κοιλία*, &c.] This note was added in C, D; it is omitted in E, and only the Latin given by Wilkin (I).

P. 151. *the Greek translation of the priest’s fee*] *στηθύνιον*, Lev. vii. 21, LXX.

P. 152. *seases*] So in all the editions, except D, which has “seats,” which may possibly be right. The word “seases” is not to be found in any Dictionary, but a correction would be mere guess-work.

P. 153. *the legs of Castor’s horse in the Capitol*] The “remarkable absurdity” is evident in the illustration in Piranesi’s *Vedute di Roma*, vol. ii. pl. vi. Evelyn saw the statue in 1644, but does not mention this deformity. (*Diary*, i. 109.)

P. 154. *flower of Christ’s passion*] Sir T. B. may have had his attention drawn to the then newly-discovered Passion-flower, by reading the account of it in Bosio’s *La Trionfante e Gloriosa Croce*, a book which he refers to on p. 97, *supra*.

P. 154. *Aiain, Viviu, Lilil.*] Wilkin prints in Sir T. B.'s Works, i. 366, a letter (MS. Sloan. 3515) from Dr. Power to the author, asking "in what plant these tearmes are inscribed." The question still remains unanswered.

P. 154. *Aiain*, C* ; *Acaia*, A to E.

P. 156. stars of *Charles wain*, C* ; *star*, A to E.

P. 157, note 1. *To be observed, &c.*] So C*, D*, but omitted in E, and only partly given in Wilkin (I).

P. 160. *gnatworms*] The rest of the treatise is omitted, in F.

P. 161. *the rule of Solon*] Plutarch, *Solon*, 23.

P. 162. *the plane tree in Pliny*] *Hist. Nat.* xii. 5.

P. 162. generality of trees, C* ; generation of trees, A to E.

P. 164. *upon thyme*, savory] *savory*, A to E ; Wilkin (I) by some singular mistake has *ivory*, which in Bohn's reprint (K) becomes *ivy*.

P. 165. *several trees be made to grow about the brinks of Acheron*] Homer, *Odyss.* x. 509-10.

P. 166. *in a pot of earth*] *pot*, C* ; *plot*, A to E.

P. 166. *annual conversion*] "Flectat ad Aquilonem, et declinit ad Austrum," (sic) is Solon's description of the motion of the sun.—Author's note, from MS. Sloan. 1847. (Note in I.)

P. 170. *why fenny waters afford the hottest and sweetest plants, &c.*] Compare George Herbert's poem "Providence":—

"Most herbs that grow in brooks are hot and dry."

P. 171. *wherein by no industry Harpalus could make ivy grow*] See Plutarch, *Life of Alexander* ; Theophrastus, *Hist. Plant.* iv. 4 ; and Pliny, *Hist. Nat.* xvi. 62.

P. 174. *Alexander found no trees so accommodable to build his navy*] Arrian, vii. 19.

P. 174. *stand not directly*, C* ; om. *stand*, A, B, C, E ; are not directly, D.

P. 175. *the tree mentioned in the Canticles*] The A. V. has "cypress" in the margin, in both passages—i. 14 and iv. 13. The R. V. has "henna." Wiclif, following the Vulgate, has "cipresse."

P. 178. *And therefore, &c.*] The extract in M begins here and continues to the end.

P. 178. *colours of mediocrity*] *Mediocres colores* were all the

shades between white and black, which were styled *extremi colores*. See Beyerlinck's *Magn. Theat.* t. iii. p. 304.

P. 179. *Helmont's tree*] The botanist J. B. van Helmont (1577-1644) supported his theory of the production by plants of all kinds of material from water, by an experiment upon a willow, which he watered in a pot with rain-water for five years. See Sach's *History of Botany*, p. 455 (Oxford, 1890).

P. 181. *Pluto*, C*, D; *Plato*, A, B, C, E.

P. 182. *light but the shadow of God*] In the *Rel. Med.*, pt. i. § 10, Sir T. B. uses the same expression in Latin as a quotation, "Lux est umbra Dei."

P. 182. *The greatest mystery of religion*] That is, the Incarnation, as expressed by the words "virtus Altissimi obumbrabit tibi" (St. Luke i. 35, *Vulg.*).

P. 182. This paragraph seems to contain the germ of Blanco White's "great" sonnet, "Night and Death," the curious literary history of which, with the variations in the text, is given by Mr. Dykes Campbell in the *Academy*, Sept. 12, 1891. See also Main's *Treasury of English Sonnets*, pp. 125, 397. [Last note written by Dr. Greenhill.]

P. 185. *Of this figure Plato made choice*] *Timæus*, xxxvi.

P. 186. *Justin Martyr took for granted*] *Apologia*, i. 60.

P. 186. *which was the systasis*, A, B, C*, E; om. *was*, C, D.

P. 187, note 1. ἐχίασεν, κ.τ.λ.] These words are among the additions in C, D, but they are not given in any former edition.

P. 187. *the mercurial characters*] ☿ the character of the planet Mercury. See p. 97, *supra*.

P. 187. ἐχίασεν, κ.τ.λ.] The words occur in Justin Martyr, *Apologia* i. 60, and have been explained as meaning,—“He impressed him as a χίασμα, i.e. in the form of the letter χ, upon the universe. Plato is speaking of the soul of the universe.” (Justin Martyr, *Clark's Ante-Nicene Christian Library*, p. 58, note.)

P. 188. *yet cannot omit*, A, B, C, E; *I cannot*, D.

P. 188. *five surnamed the number of justice*] Sir T. B. seems here to have confused four, the number of justice, and five, the number of marriage. See Macrobius, *Somnium Scipionis*, lib. C, p. 18.

P. 188, note 2.] The nine asterisks are omitted in B.

P. 189. *the middle point, &c.*] Referring perhaps to the description of the game called τὸ πεισόν in which, according

to Julius Pollux—*τῶν δὲ πέντε τῶν ἑκατέρωθεν γραμμῶν μέση τις ἦν ἱερὰ καλουμένη γραμμή· καὶ ὁ τὸν ἐκείθεν κινῶν πεττὸν παροιμίαν ἐποίει, κινεῖ τὸν ἀφ' ἱερᾶς.* (*Onomasticon*, IX. vii. 97-98.)

P. 189. *Plutarch and the ancients*] See Plut. *De Orac. Def.* 426-30.

P. 190, note 2. *as herons, &c.*] This note is among the Additions in C, D, but is omitted in E.

P. 190. *the conjugal or wedding number*] See Plutarch, *Quæst. Rom.*

P. 192, note 1. *oscula quæ Venus, &c.*] These words (from Horace, *Od.* i. 13. 15) are among the Additions in C, D, but are omitted in E.

P. 193. *one of the numbers that makes up, &c.*] All the old editions read "makes," which therefore has not been altered to "make."

P. 193. *the notion of Trismegistus*] *Νοῦς μὲν νοοῦμενος, mens quidem intelligibilis, ὕλης μὲν γὰρ τὸ λεπτομερέστερον ἀήρ, αἶρος δὲ ψυχὴ, ψυχῆς δὲ νοῦς, νοῦ δὲ ὁ θεός.* (Hermes Trismegistus, *Parmander*, ch. v.)

P. 194. *the same is twice repeated*] And, for this reason, Jews still regard Tuesday as a day of good omen.

P. 195. *radical letters in the pentateuch*] This would seem to refer to the tradition, mentioned in Midrash Tanhuma on Exod. xxx. 12, that Moses, by command of God, took the first letters of the names of the tribes, and found them equal to the number of the Israelites,—deducting those who were slain in the affair of the golden calf.

P. 196. *parts of water unto their wine*] Alluding to the Greek rule, *ἡ πέντε πίνειν, ἡ τριῖ, ἡ μὴ τέσσαρα.* See also Plutarch, *Symposiaca*, iii. 9, and Athenæus, x. 426.

P. 197. *the cure of the blind man by Serapis, &c.*] This is recorded in one of the inscriptions collected by Gruter. See also, Ennemoser's *History of Magic*, vol. i. p. 438 (Howitt's translation).

P. 197. *more or less than five acts?*] The rule is laid down by Horace:—

"Neve minor, neu sit quinto productior actu,
Fabula, quæ posci vult et spectata reponi."

(*Ars Poetica* 189-90.)

P. 199. *to hinder the birth of Hercules*] Ovid, *Met.* ix. 298-300

P. 199. *the amphidromical feasts*] See Aristophanes, *Lys.* 757; Plato, *Theæt.* 160; Athenæus, ix. 370; and Suidas, whose words are καὶ δῶρα πέμπουσιν οἱ προσήκοντες ὡς ἐπὶ τὸ πλεῖστον πολὺποδας καὶ σηπίας.

P. 199. *the men of Cadmus?*] Apollodorus, iii. 1. 1.

P. 199. *Proteus in Homer*] *Odys.* iv. 411-13.

P. 199. *the fifth year's ox*] Homer, *Il.* ii. 403; vii. 315.

P. 199. *the soul a rhombus*] *Meditations*, viii. 41; xi. 12.

P. 200, note 1. *Hyades . . . at that time*] In our latitudes, the Hyades are near the western horizon at midnight at the beginning of March. Thus we have an interesting, and very characteristic, intimation of the date when the last words of this book were penned.

P. 201. *Night . . . the daughter of Chaos*] Hesiod, *Theog.* 123

ADDENDA.

Page 162. Note on p. 5, n. 1, *prolato*] This is so in all the old editions, and therefore has not been corrected to *plorato*.

Page 166. Note on pp. 25-28. These are the passages of which Philipott made use without acknowledgement in the *Villare Cantianum*, 1659, pp. 249-251. Sir T. B. mentions the plagiarism in his *Common Place Books*.

Page 183. Note on p. 192, *the letter E.*] This is He (η), and rightly, in all the old editions. In Wilkin's edition (I) and Bohn's reprint (K), it is erroneously printed E, and the mistake was not corrected in collating for this edition.

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- Archimedes, 174.
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- Arnoldus Montanus, 4. *See* Cæsar.
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- Bado-Aureo, Johannes de [Tractatus de armis cum Franc. de Foveis, cura Edv. Bissæi. fol. *Lond.* 1654], 97.
- Bauhin, Caspar [Πίναξ theatri botanici. 4to, *Bas.* 1623; referred to by Sir T. B. as Theatrum Botanicum]. But there appears to be some confusion, as he speaks of "three folios," which is the description of the "Historia Plantarum," by J. Bauhin (1650), 2nd Ep. Ded. ix, 123, 133.
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- Belon, Peter (Bellonius) [Plurimarum memorabilium rerum in Græcia, Asia, Ægypto, etc., observationes. 8vo, *Ant.* 1589], 146, 172.
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- Byshe, Edward (Bissæus). *See* Bado-Aureo, and Upton.
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- Cæsar [cum notis variorum, studio Arnoldi Montani. *Lugd. Bat.* 1651], 4, 17, 25 bis.
- Calaber, Quintus, or Quintus Smyrnæus, 4.
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- Casaubon (Isaac), 37. *See* Suetonius.
- (Meric), 38. *See* Antoninus.
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- Cicero, 25, 94.
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Curtius, Quintus, 116.

Cyprian, St. [Epist. 67], 10.

Cyprius, Adolphus, ? Cypriæus, John Adolph. [Annales Episcop. Slesvic. *Colon.* 1634], 28.

Dante, Purgatorio, 50.

—— Inferno, 63, 65.

Dempsterus, Thomas, 6 note. See Rosinus.

Didymus [Scholia on Homer], 99.

Diodorus Siculus, 9, 92, 116.

Diogenes Laërtius, 40.

Dion Cassius, 32, 41.

Dioscorides, 2nd Ep. Ded., ix.

Donatus [Marcellus, Scholia in Latinos . . . Scriptores. *Venet.* 1604], 71.

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Euclid, 34, 142.

Euripides, *Hecuba*, 30. *Polyidus*, 77.

Eusebius [Chronicon. fol. *Lugd. Bat.* 1606], 99.

Eustathius [Commentary on Homer], 99, 112.

Felix, Minucius, 22.

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Goropius Becanus. See Becanus.

Grammaticus, Saxo, 26. See Saxo.

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Hesiod, 191.

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Hippocrates, 45, 138, 181, 196, 200, 2nd Ep. Ded. x.

Hippolytus, 96.

Holingshed, Raphael [Chronicles of England, Scotland, and Ireland. *Lond.* 1577], 29.

- Homer, 54, 71.
 ——— *Il.* 4, 8, 75, 110, 201.
 ——— *Od.* 62 quater, 94, 199.
 Hondius, Pet. in lib. Belg.?, 2nd Ep. Ded. xii.
 Isaiah, 82.
 Jeremiah, 124.
 Jornandes [De Getarum sive Gothorum Origine. *Lugd. Bat.* 1597], 82.
 Josephus, Flavius [Antiq. Judaic.], 11, 35, 92.
 Justinian, 5. *See* note.
 Justin Martyr, 186 [115, 6 ed. Trollope].
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 Laërtius, Diogenes, 40.
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 Lampridius, 41.
 Laurenberg, Peter [Horticultura duobus libris? 4to, *Frankfort*], 2nd Ep. Ded. xii, 136.
 Lazius (Wolfgangus), 33.
 Leo of Modena (R. Jehudah Arie) [Istoria de Riti Hebraici, vita et Osservanze de gli Hebrei di questi tempi], 77.
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 Lipsius, Justus?, 96.
 Livy [French translation by Blaise de Vigenère, with Notes on the first decad. fol. *Paris*, 1583], 5 note, 23 note (*Fabr. Bib. Lat.*).
 Lucan, 84.
 Lucian, 54, 62.
 Lucretius, 54.
 Lyserus (Michael) [Culter Anatomicus. 8vo, *Hafn.* 1653], 44 note.
 Machiavelli [The Prince, English translation by Edw. Dacres. *Lond.* 1640], 64.
 Macrobius, 21.
 Magius, Hieron. It is doubtful which of his numerous works is referred to, in the note to p. 9, though it is mentioned in such a way as would seem to imply that it was a familiar and well-known book. The "De Mundi Exustione" (*Basil.* 1562) and the "Variæ Lectiones" (*Venet.* 1564) have been searched in vain.
 Marcellinus. *See* Ammianus.
 Marcellus Donatus, 71. *See* Donatus.
 Marlianus, Bartholomæus ["Antiquæ Romæ Topographia," 1538, and "Urbis Romæ Topographia," 1538. (In the *Thesaurus* of Grævius, vol. ii)], 43.
 Martial, Ep. Ded. i.
 Mela, Pomponius, 25.

Minucius Felix, 22.

Montanus, Arnoldus. *See* Cæsar.

Neapolis, Carolus [Anaptyxis ad Fastos Ovidii. fol. *Antw.* 1638], 5.

Nicolaus Damascenus, 7. Quoted by Strabo xv. i in fin.

Olaus Wormius, 26, 28. *See* Wormius.

Oracula magica Zoroastris, cum scholiis Plethonis et Pselli, ed. Jo.

Obsopæus. *Paris*, 1599, 69.

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Ovid's Fasti, 5; Metamorphoses, 90.

Paracelsus, 134.

Pausanias, 41.

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Petronius, 34.

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Plato, 34, 37, 112, 187.

—— *Tim.* 90, 185.

—— *Leg.* 191.

—— *Phædo*, 54, 66.

—— *Rep.* 42, 60, 61, 63.

—— *Symp.* 149.

Plempius, Vop. F. [Ophthalmographia. *Amst.* 1632], 2nd Ep. Ded. i.

Plethon, 69. *See* Oracula.

Pliny the Elder, 2nd Ep. Ded. xi, 5, 31, 34, 42, 54, 91, 103, 162.

Plutarch's Lives, Ep. Ded. iv, 19, 40, 41, 44, 93, 120.

—— *Moral.* 189, 191.

Polybius, 114.

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Pomponius Mela, 25.

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Propertius, *Plate*, 23.

Psellus, 69. *See* Oracula.

Quintilian, *Plate*, 100.

Quintus Smyrnæus, or Quintus Calaber, 4.

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- Scaliger, 2nd Ep. Ded. xi, 196, 198.
- Schoneveldus? de Pisc., 136.
- Sidonius Apollinaris, 22.
- Spelman, Edward [Aspilogia, see Upton, De studio militari], 107.
- Stow, John ("Survey of London." *Lond.* 1633], 21.
- Strabo, xv. 1 in fin., Nicol. Damasc., 7, 25.
- Strada, Famiano [Icones famosæ?], 107.
- Strebæus, 92 note, 94.
- Suetonius [ed. Is. Casaubon. *Genev.* 1595], 10, 37, 38, 71, 156.
- Surius, Laurentius [De probatis Sanctorum Historiis. *Col. Agr.* 1576, &c.], 34.
- Symmachus, 78. See Jo. Drusius.
- Tacitus, 25, 26 bis.
- Tertullian, 22.
- Thales, 6.
- Theocritus, 100.
- Theophrastus [Hist. Plant.], 2nd Ep. Ded. ix, 34, 99, 166, 167.
- Thucydides, 44, 116.
- Tibullus, 69.
- Tiraquellus (Andr.), 5. See Alexander.
- Tirin, Jacques (Tirinus) [Commentarium in Vet. et Nov. Test. fol. *Antw.* 1632], 51.
- Trismegistus, 148, 193.
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- Varro, 32, 94, 100, 161, 167.
- Vergilius, Polydorus, 25. See Polydorus.
- Vigenère (Blaise de), 23. See Livy.
- Virgil, 62 bis, 100, 113, 116, 161, 162, 171 (*Ecl.* 7. 34).
- Vitruvius, 105, 106 note, 177.
- Vulgar Errors, by Sir Thos. Browne, 152.
- Wormius Olaus [Danicorum Monumentorum Libri VI. *Hafn.* 1643], 26, 28.
- Xenophon, 93, 94.
- Xiphilinus, Joh. [Dionis Rerum Romanarum Epitome. *Paris*, 1568], 25.
- Zoroaster. See Oracula.

INDEX OF NAMES, NOT AUTHORS.

[The references in this Index are to the pages of the First Edition.]

Aaron, 35, 107; his mitre in henbane, 142 (described by Josephus, *Antiq.* iii. 7).

Abel, 101.

Abraham, 3, 22, 46, 101, 192.

Absalom, 12.

Acheron, 165.

Achilles, 4, 38, 63, 71, 75, 199.

Adam, 2, 3, 67, 90, 101.

Adrian, 17, 18, 21, 76, 84, 96.

Æneas, 62, 63.

Africa, battle of (Zama), 114.

Agamemnon, 62, 76, 201.

Agricola, 16, 20.

Ahasuerus, 93.

Ajax, 62, 142.

Ajax Oileus, 9.

Alaricus, 82.

Alcinous, garden of, 99.

Alcmena, 54.

Alcmena's nights, 71.

Alexander, the Great, 49, 107, 171, 174, 198.

——— the Martyr, 96.

Almans, 115.

Amazonian tomb, 120.

America, 2nd Ep. Ded. ix, 2, 201.

Americans, 110.

Anconians (Iceni), 16.

Andrean, or Burgundian cross, 96, 143.

Andrew, St., 96.

Angelo, St., Castle of, 84.

Anglesea, 29.

Anglia Cymbrica (in Denmark), 26.

Ansgarius (or Anscarius), Abp. of Hamburg in the ninth cent. (St. Anskar), 27. *See* note.

Anthony, St., 39.

Antipodes, 165, 201.

Antoninus (the Emperor), 2nd Ep. Ded. ix, 17, 21, 97.

Apelles, his pictures, 2nd Ep. Ded. xiii (the story referred to is given in Pliny, *Hist. Nat.* xxxv. 36, 12).

Apollo, 89, 110.

Aquila, 78.

Arachne, 111.

Archemorus, 4.

Archimedes, 70, 155.

Armenia, 91.

Armenians, 107.

Artaxerxes, Longi-manus, 93.

——— Mnemon, 93.

Artemisia, 45.

Arthur, king, Ep. Ded. vii.

Asa, 10.

Ashbury [Astbury?], 29.

Athens, Ep. Ded. iv, 7, 161.

Athenians, 47, 116.

Atropos, 72.

Attalus, King, 94.

Augustus, 105, 107, 156.

Ausgurius. *See* Ansgarius.

Babylon, 91, 92, 93, 116, 174.

Babylonian Gardens, 91, 99.

Bacchus, 171.

Balearians, 9.

Beersheba, 102.

Bellinus, brother of Brennus, and king of the Britons, 25.
 Bembus (Cardinal Bembo), 98, 148.
 Benjamin, 195.
 Binab, cabbalistical name, described as "fons omnium animarum" (Archangelus, p. 781), 192.
 Boadicea, 16, 17, 20.
 Brahmans. *See* Indian Brachmans.
 Brancaster, 15, 16, 18.
 Branodunum (Brancaster), 15.
 Brennus (king of the Britons), 25.
 Bretenham, 18 *note*.
 Britain, 17, 20.
 Britannicus (the Emperor Claudius), 21.
 Britons, 20, 25, 28.
 Bruxellis (Brussels), 107.
 Buckenham Castle, 18 *note*.
 Burghcastle, 18.
 Burnham, 15.
 Burntwood (Brentwood, in Essex), 18.
 Buxton, 17, 32.
 Cadmus, 98, 187, 199.
 Caesar, Julius, 10, 18, 20, 21, 62, 63, 108.
 Caesaromagus, 18 *note*.
 Cain, 101.
 Calvary, Mount, 3, 51.
 Cambyses, 53, 78.
 Canaan, 51.
 Canaanitish woman, 75.
 Cancer (sign of), 57, 166.
 Canonium, 18 *note*.
 Canticles, 109, 175.
 Canutus, 18.
 Capricornus, 57.
 Caracalla, 21.
 Castile, king of, 44.
 Castor (in Norfolk), 17, 18 bis, 32.
 Castor's horse, 153.
 Cato of Utica, 63, 66.
 Centaur, 122.
 Cestius, 108.
 ——— Pyramid of, 105.
 Chaldeans, 7.
 Cham (Ham), 91, 116.
 Chaos, 201.
 Charles, the Fifth, 73.
 ——— the Great, 27, 106.

Charles' wain, 121, 156.
 Charon, 62.
 Chelmsford, 18 *note*.
 Cheops, king, 119.
 Childerick, 24, 36.
 Chinois (Chinese), 9.
 Chionia, 4.
 Chus (Huz), 91.
 Cimon, Ep. Ded. iv, *note*.
 Claudius (the Emperor), 16, 20, 21, 25.
 Cleopatra, bed of, 201.
 Coggeshall, 18 *note*.
 Combretonium ad Ansam, 18 *note*.
 Commodus, 17, 21.
 Compound column, 106.
 Constans, 17.
 Constantine, 16, 17, 47, 95, 96.
 Corinthian column, 106.
 Crete, Labyrinth of, 117.
 Cuthred (King of the West Saxons, A.D. 741-754), 18, 47.
 Cynthia, 23.
 Cyrus, the elder, 49, 93.
 ——— younger, 93, 94, 171.

Damascus, 3.
 Daniel, 11.
 David, 24, 71, 195, 196.
 Deiphobus, 62.
 Democritus, 37, 54.
 Denmark, 28.
 Diana, 89.
 ——— temple of, 35, 75.
 Diocletian, 17.
 Diogenes, 55, 58.
 Diomedes, 99.
 Domitian, 38.
 Doric column, 106.
 Dorset, Marquis of, 49.
 Druids, 25.
 Durotriges, 18.
 East - bloody - burgh furlong, 18 *note*.
 Ecbatana, 11.
 Eden, 102.
 Egypt, 84, 97, 105, 187.
 Elijah, 12, 81.
 ——— the rabbi, 73.
 Elmham, 36.
 Elysian ferryman, 60.

Elysium, 64, 83.
 Enoch, 12, 40, 81.
 Ephraim, 148.
 Epicurus, 63, 65.
 Euripides, 41.
 Europe, 110.
 Ezekiel, vision of, 40, 52.

Farnese, Cardinal, 23.
 Ferrara, 171.
 Flanders, 35.
 France, 22, 171.
 Franks, 115.
 Frotho the Great (Frode), 27.

Gallia, 25, 41.
 Gallienus, 17.
 Galvanus, his lamp, 43.
 Gammadims, 16.
 Genesar, 102.
 Geta, 21.
 Getes, 4.
 Goa, 172.
 Goodier, Mr., 2nd Ep. Ded. x. (Mr. Goodyeere, vol. i. p. 394, ed. Wilkin).
 Gordianus, 81.
 Gothic buildings, 105.
 Gothlanders, 26.
 Grecian, 115, 120.
 Greece, 98, 100, 119, 126, 187.
 Greenland, Ep. Ded. iv, 133.
 Gumbrates, king, 4.

Harald, 27.
 Hare, Sir Ralph, Baronet, 18.
note.
 Harpalus, 171.
 Hector, 4, 73.
 Hecuba, 30.
 Helena, St. (mother of Constantine the Great), 47.
 Heliogabalus, 21.
 Helmont, J. B. van, 179.
 Henry II, king, Ep. Ded. vii.
 Heraclitus, 6, 44.
 Hercules, 4, 31, 50, 54, 62, 63, 199.
 Hermes, 112.
 Herodias, 75.
 Herostratus, 75. (This mention may have suggested Cibber's well-known lines:—

"The aspiring youth that fired
 the Ephesian dome
 Outlives in fame the pious fool
 that raised it.")
 Herthus (Hertha, goddess of earth, worshipped by the Suevi, 7).
 Herulians, 4.
 Hippocrates' patients, 75.
 Humbert, St., 34.
 Hyades, 122, 200.

Iago, St., of Galicia, 122.
 Icen, 16, 18.
 Icenia, 17.
 Ichthyophagi, 8.
 India, 99, 102.
 Indian Brachmans, 7.
 Innocents', St., Churchyard (in Paris), 84.
 Ionick column, 106.
 Isaac, 44, 101.
 Isis, 148.

Jaar Eden, 102.
 Jabesh, 10.
 Jacob, 148.
 Jair, eighth judge of Israel, 1.
 Janus, 73, 103.
 Jagon, Robert, 17 *note.*
 Jehoram, 10.
 Jehosaphat, valley of, 52.
 Jerome's picture, 39.
 Jerusalem, 102, 167, 172.
 Job, 71.
 Jonah, 40, 117.
 Jordan, 102.
 Joseph, 195.
 Joshua, 24, 46.
 Judas, 37.
 Julia (niece of Domitian), 38.
 Julian, Emperor, 4.
 Julius, 63. *See note.*
 Juno, 199.
 Jupiter, 31, 54, 149, 181, 199.

Lacedemonians, 116.
 Laertes, 94.
 Lateran Obelisk, 97.
 Lazarus, 40, 81.
 Le Gros, Thomas, Ep. Ded. iii.
 Leo, the Third, 106.

Leviticus, 194.
 London, 18, 21, 117.
 Lot's wife, 49.
 Lucina, 77.
 Ludovicus, Pius, 27.
 Lycurgus, 36.

 Macedonia, 41.
 Magi, Persian, 7.
 Mahometans, 58.
 Manasses, 148.
 Manlius, 5.
 Marcellus, 41.
 Marcus (Aurelius Antoninus), 21.
 Marius, 6.
 ——— the martyr, 96.
 Mars, 110.
 Martialis, Bishop, 10.
 Massingham, Little, 29.
 Matilda, 18.
 Mausoleum, of Augustus, 105.
 Mausolus, 31, 45.
 Megara, 120.
 Megarians, 47.
 Meneceus, 4.
 Mercury, 62.
 Methuselah, 69, 70, 73, 76. (There
 is a chapter on Methuselah in
Vulgar Errors, vii. 3.)
 Minerva, 111.
 Minotaur, 117.
 Mizraim, 79, 91.
 Morta, Deity of, 61.
 Moses, 4, 70, 81, 90, 118.
 Musselman believers, 10.

 Narses, 115.
 Nebuchodonosor, 92.
 Neptune, 110.
 Nero, 5, 16, 20, 38.
 Nervæ Forum, 105.
 Nimrod, 79, 91.
 Nineveh, 116.
 Ninus, 117.
 Noah, 100, 101; ark of, 35, 91, 174.
 Normandy, 28.
 Norway, 28.
 Norwich, 18, 19.
 Numa, 5, 8, 103 *note*.

 Og, 119.
 Opimian wine, 34.

Orion, girdle of, 79, 121.
 Ortelius, 49.
 Orus, 148.
 Osiris, 79, 112, 148.
 Ostorius, 16.

 Palamedes, 98.
 Pan, pipe of, 121.
 Paradise (the garden of Eden), 90, 92,
 99, 103; (Heaven), 2nd Ep. Ded. xii.
 Paris, 84.
 Parsees, 7.
 Parthians, 107, 115.
 Paston, Sir William, Bt., 17.
 Patroclus, 4, 32, 38, 44.
 Paul, St., 195.
 ——— interment of, 10.
 Paulinus (Caius Suetonius), 16.
 Penelope, 62, 112.
 Penthesilea, the Amazonian queen,
 4.
 Periander, wife of, 61.
 Persia, 42, 201.
 Persians, 7, 47, 48, 49, 92, 112.
 Peter, interment of St., 10.
 Phaëton, 79.
 Pharamond, 24.
 Pharaoh, 79.
 ——— needles of, 148.
 Philip, king of Macedon, 115.
 Philopœmen, 36.
 Phœnicians, 47.
 Pilate, 75.
 Platonicks, the, 55.
 Pluto, 181.
 Pompey, 10, 44, 62.
 Pompey's sons, Ep. Ded. iii.
 Poppæa, 5.
 Posthumius, 17.
 Potosi, 1.
 Prasutagus, 16.
 Procrustes, bed of, 119.
 Proteus, 199.
 Ptolemy, 97, 107.
 Pyrrhus, his toe, 43.
 Pythagorians, 8, 55.

 Quintus, brother of Cicero, 25.

 Remus, 5.
 Ringo, 27.
 Rollo, 28.

- Rollrich stones (Rollright, Oxfordshire), 28.
 Roman buildings, 105.
 Romans, 191.
 Rome, Ep. Ded. iv, 5, 7, 20, 22, 37, 41.
 Russians, 58.

 Sarai, 192.
 Sardanapalus, 80.
 Sardis, 94.
 Sarmatia, 26.
 Saturn, 100.
 Saul, 10, 196.
 Saxons, 19, 20.
 Scipio (Africanus), 114.
 Scribonius Largus, 25.
 Semiramis, 91.
 Sephiroth (*the ten Emanations from God*, according to the cabalistic doctrines), 196.
 Serapis, 97, 197.
 Seth, pillars of, 116.
 Severus, 16, 17, 21, 22, 32, 41.
 Shushan, 93.
 Sibilla, 62.
 Siloah, 102.
 Simon Maccabæus, 11 *note*.
 Sina, 119.
 Sitomagus, 18.
 Socrates, 54, 55, 63, 66.
 Solomon, 71, 92, 102, 108, 109, 124, 167.
 Solon, 161.
 Southcreake, 17.
 Spain, 171, 172.
 Spartans, 19.
 Spittle Fields, by London, 21.
 Starkatterus, 27.
 Stoicks, 55.
 Sueno (Sweyn), 19.
 Sueons, 26.
 Sylla, 5, 6, 82, 108.

 Targum, the, 102.
 Tarquinius Priscus, 31.
 Tartarus, 60.

 Tasciæ, 18.
 Taurus (constellation), 122.
 Tenupha, 98.
 Tertullian, 22.
 Tetricus, 17.
 Thales, 6.
 Theban war, 4.
 Theodoric, 41 *note*.
 Thersites, 76.
 Theseus, Ep. Ded. iv.
 Thessalians, 115.
 Thetford, 18, 19.
 Thracians, 4.
 Tiberius, 37, 71.
 Tiresias, 61.
 Titus, 21.
 Tournay, 24.
 Townshend, Sir Horatio, Ep. Ded. iv.
 Trajan, 17, 41.
 Trinobantes, 18.
 Troy, 4.
 Tuscan pedestal, 95, 106.
 Tyrants, the thirty, 17.

 Ulfketel, 19.
 Ulysses, 30, 61, 62, 99.
 Unguinus, 27.

 Valens, 17.
 Vashti, 93.
 Venta, 18, 19.
 Venus, Ep. Ded. vii, 97, 110.
 Vespasian, 16, 17, 21.
 Victorinus, 17.
 Vulcan, 89, 110, 199.

 Walsingham, Old, 14, 16.
 Ware, 117.
 William, the Conqueror, 18.
 Witherley, Dr. Thomas, 14 *note*.
 Wood, Mr. Thomas, 18 *note*.

 Yarmouth, 18 bis, 32.

 Zedechias, 10.
 Zoroaster, 91.

INDEX GENERAL AND GLOSSARIAL.

[The references in this Index are to the pages of the First Edition, which are indicated by the figures in the inner margins.]

Aaron, the flower Arum or Arun, 123.

Abiit ad plures, he is gone unto the greater number, or majority=he is dead, Ep. Ded. v. See *Notes and Queries*, Ser. 6, vol. vi. 225; vol. xii. 454, 5, and in other places.

Abstersion, wiping or cleansing, 124.

Abstrusities, things abstruse, 197. See also *Vulgar Errors*, i. 8, 34.

Absumption, consumption, destruction, 9. *Absumption* by cremation, opposed to *depositure* by interment.

Accension, ignition, kindling, 59. Used also in *Vulgar Errors*, Bk. i. ch. 5, 344-349; and the verb *to accend*, *ibid.*

Acception, acception, meaning, 135.

Accommodable, suitable, capable of being fitted or adapted to anything, 146, 174, 188.

Account (a lower), a later date, 22.

Aculeous plantation, sharp, pointed, needle-like, 125.

Acuminated shells, sharp pointed, 132.

Admire, to wonder at, 35, 36.

Adumbration, shading, overshadowing, ἐπισκίασις, "from the branches," 177; used in reference to "the Cherubim shadowing the mercy-seat," 182; used in a secondary or metaphorical sense for symbolic representation (?) in *Rel. Med.* 19, l. 16 (*Golden Treasury* ed.).

Advantage, to set forth, 97.

Affect, to prefer, show a liking for, 2, 8, 40, 112, 182 *et al.*: the verb is used in same sense in *Rel. Med.* 104, ult. III. II.

Alary, wingy, resembling wings, alæ, 181.

Alb. Ovor., contraction for *Albumen Ovorum*, white of egg, 45; used as an application to burns. See Peter Lowe's *Discourse of Chyrurgie*, 1612, 34.

Ambient figure, surrounding, encompassing, 103.

Amissio, loss, 198: the verb "to amit," used in *Vulgar Errors*, Bk. ii. ch. i. 269.

Amphidromical feasts, ἀμφιδρόμια, an Attic festival at the naming of a child, 199. See note.

Ampliations, enlargements, extensions, 161.

Anatomies, skeletons, 39: found also in *Rel. Med.* 62, l. 1.

- Angles of contingency, 83; of incidence, 183, 184; of indenture, 153.
- Animosity of that attempt, *courage, boldness*, 65, 66.
- Ansatae cruces, *handed crosses*, 97, 187.
- Antiquate, *to make old*, 69.
- Appendencies, *things appendent*, 50.
- Apposition, *application, or bringing nigh to*, 59.
- Aræ, *altars of the Gods above*, 15.
- Archimime, *the chief jester, or mimic, who took part in Roman funeral processions*, 59.
- Architectonical, *according to the principles of an architect*, 103, 106.
- Arefaction, *state of growing dry*, 49.
- Aræostylos, *a building in which the distance between the columns is equal to four or more diameters of the column*, 177.
- Artifice of clay, *art of working, workmanship*, 31. See Latham.
- Attendance, *accompaniment*, 2nd Ep. Ded. xii.
- Attenuable parts, *that may be attenuated or made thinner*, 45.
- Attrition, *rubbing together*, 36.
- Augmenting glasses, *increasing, magnifying*, 144.
- Aurelian metamorphosis, 143, 157.
- Averse from, *disliking*, 10.
- Aversely, *in an averse manner, turning the face away*, 55 (*Vulgar Errors*, pp. 137, 261, Murray).
- Battalia, Roman, 113.
- Bit, *that frugal, small morsel*, 25.
- Blot, *indistinct mass*, 70.
- Boisterous, *rough, savage*, 82.
- Bonfires, *in old editions spelt bonfires*, 22.
- Botanologer, *botanist*, 102.
- Botanology, *botany*, 175.
- Breeze, *gadfly*, 152.
- Brendetyde (Danish), *burning tide*, *to signify the era of cremation*, 26 note.
- Brother of death, *sleep*, 77. See note.
- By-themes, *out of the way*, 2nd Ep. Ded. x.
- Cabbalistical, *cabbalistic*, 192 bis, 196.
- Cadavers, *corpses*, 59.
- Cadaverous burials, *burials of the entire corpse*, 30.
- Calicular leaves, *formed like a cup*, from Latin *calix*, *a cup*, 128, 139, 140, 155, 180. Also in *Vulgar Errors*.
- Callosities, *dull feelings, insensibility*, 77.
- Calx, *a term used by the old chemists for a powder or friable substance, the result of burning or roasting*, 45.
- Candour, *whiteness*, Latin, *candor*, 178.
- Cariola, *the haunch-bones of a horse*. Sir John Evans (note in R) says, "The term seems to be Italian. In Florio's *Italian and English Dictionary*, 1659, *Cariola* or *Carriola* is defined to mean a 'trundle-bed' . . . also the root or rumpe of a horse's taile," 50.
- Carnous parts, *fleshy*, 50.
- Castrensial mansions, *belonging to a camp*, 117.

- Causally**, *for a special reason*, 102.
- Cavedia** (Lat. cavædium), *courtyard, or atrium*, 177. See Plin. *Ep.* ii. 17.
- Cemeterial**, *of or belonging to a cemetery*, 40, 47.
- Centos**, "a composition formed by joining scraps from other authors" (Johnson), *Ep. Ded.* vi.
- Century**, *a collection of a hundred names*, 76.
- Cereclothed**, *wrapped in a cerecloth*, 49.
- Channelled**, *worn in channels*, 137.
- Chapters of the pillars, capitals**, a word often found in the Old Testament, 109.
- Chet mat**, Arabic words whence our *check mate* is derived. (Shāh mat. See *Encyclopædia Britannica*, s.v. "Chess"), 112.
- Chiasmus**, χιασμός, *decussation*, 128, 146.
- Chimæras**, *mere fancies*, 83.
- Chiromantical conjecturers**, *making conjectures from palmistry*, 198.
- Chirurgery**, *surgery*, 90.
- Circinations** (Latin, circinatio), *spherical rounds*, 168.
- Circumscription**, *limitation, boundary*, 32, 92, 93.
- Cirrous parts**, *having curls or tendrils*, 164.
- Civilians**, *writers upon the Civil Law*, 12.
- Civility**, *civilization*, *Ep. Ded.* vii, 26.
- Civilly**, *in a civilized manner*, 9.
- Clamations**, *iterated, cryings out, invocations, lamentations*, referring to the *conclamatio* of the Roman funerals, 58.
- Clouts and stones**, *blows, buffets*, 55.
- Cod**, *husk or pod*, 127, 131, 181.
- Cognition**, *knowledge*, 67, also in *Rel. Med.* 214. l. 23.
- Collectible**, *capable of being collected or gathered*, 3.
- Columnary**, *formed in columns*, 158.
- Commissure**, *line of junction, joint, seam*, 158.
- Compage**, *coherence*, 49. Used also in *Rel. Med.* 188. l. 2.
- Com-plantation**, *planting together*, 188.
- Complexed**, *complex*, 195.
- Complexionally**, *by temperament, constitutionally*, 65. Also found in *Vulgar Errors*, bk. vii. ch. 17, vol. ii. p. 272 (ed. Bohn), and in *Rel. Med.* pt. i. sect. 8, vol. ii. p. 331, where some editions have *complexionably* (a word probably not elsewhere met with, and admitted by Dr. Murray into his *New English Dictionary* on the authority of this passage only).
- Composure**, *composition*, 31, 158. Also in *Rel. Med.* 108. l. 22.
- Composure**, *round, round shape or composition*, 30.
- Comproduction**, *producing together*, 129.
- Comproportions**, *proportions together*, 50.
- Compute**, *point of, reckoning, of time*, 27.
- Concentrical**, *concentric, having a common centre*, 168, 175.
- Conceptions**, *with many, according to many opinions*, 92.
- Concernments**, *concerns, affairs*, 161.
- Conclamation**, *shout of many together*, 12.
- Confirmable**, *capable of being confirmed*, 4, 22, 109, 200. Used also in *Rel. Med.* 75. ll. 10, 11.
- Consideration unto**, *comparison with*, 65.

- Considerators, considerers**, 67, 98.
Consistences, firmnesses, coherences, 78.
Consulary coins, consular, 95; **date**, 34.
Contemner, despiser, 63. Used also in *Rel. Med.* 191. l. 3.
Contempered, deteriorated by mixing, 3, 19.
Contignations, act of framing or uniting beams, 147.
Continuities, texture or cohesion of parts, 112.
Cornigerous, horned, having horns, 150.
Coronally, like a crown, or circle, 98.
Cosmography, description of the world, 79.
Cottonary, relating to, or composed of, cotton, 145.
Counters, common, ordinary arithmeticians, 70.
Country, used in the sense of county, 17, 27.
Crambe verities, stale, tedious, alluding to the Greek κράμβη, 199. Also used in *Rel. Med.* 123. l. 17.
Cremation, burning of the dead, 5, 9, 14.
Cretaceous, having the qualities of, or abounding with, chalk, 152.
Criticism in agriculture, quibble, 133.
Cruciated, crossed, 148, 149.
Crucigerous, marked with the figure of a cross. Stone of St. Jago. *Chiastolite*, from χιαστός. **decussated**, 95, 122.
Crusero, the Southern Cross, 122.
Cryptography, act or art of writing in secret characters, 121.
Culinarily, in cooking, 149.
Cuneus, a wedge, a military term, 115.
Cupel, a refining vessel used in cupellation, the process of refining gold and silver by melting them in a cupel with lead, 45. *Copel*, obsolete form used by Sir T. B.
Curiosity of plants, interest in plants, inclination to learn about them, 91.

Declinations, inclination, 166.
Decline, to shun, avoid, 6, 7, 14, 32, 40, 47, 96.
Decretory, definitive, settled, 81.
Decussation, decussated, decussatively, decussative, crossing at an acute angle, intersection in the form of X, 95 bis, 98, 99, 110, 112, 113, 143, 152, 186.
Defensative, that which serves to guard or defend, 126.
Delivered, recorded, handed down, 14, 28, 100.
Deformity, departure or difference in shape, 119.
Delivereth, 25, 91, 134.
Deliveries, histories, accounts, 99, 161.
Depositure in dry earths, deposition, laying down, interment, 8, 9.
Descensions, astronomical phrase, 77.
Diameters, diminish their, shrink into nothing, 83.
Diametrally, diametrically, 153.
Diametrals, diameters, 152.
Diaphanous, transparent, 134.
Dietetical conservation, preservation for food, 90.
Differenced, distinguished, 135.
Diffusions, spread, extension, 162.
Dipteros hypæthros, 176.

- Discover, *display, betray*, 58.
 Disparage, *to undervalue, depreciate*; we shall not think our reader requires us to repeat the solemnities, &c., 14.
 Dispersed, *spaced out*, 100.
 Dispersedly, *in a dispersed manner*, 18.
 Disposed unto, *liable to*, 45.
 Diuturnity, *length of time, long duration*, 69, 73, 77.
 Divinity, used for *divines*, 90, 196.
 Draught, *sketch, outline, drawing*, 9, 39 *ter*, and frequently.
 Drive at, *aim at*, Ep. Ded. vii, 53.
 Ductors, *leaders or commanders*, 115.
 Eccentric, *deviating from the centre*, 169.
 Ecliptically, *from the right hand to the left*, 166.
 Edifical, *architectural*, 143.
 Effluvioms, *powerful exhalations*, 163.
 Elbow, applied geographically to an *angle of a country*, 17.
 Eldest parcels, *oldest*, Ep. Ded. v. Sir T. B. uses *elder* for *older* in *Rel. Med.* 20. l. 20: 63. l. 10; and in *Vulgar Errors*, vii. 4, p. 218 (ed. Bohn).
 Embezzle, *to squander, waste*, 37.
 Embryon philosophers, more commonly *embryo* (Gr. *ἐμβρυον*), *in an undeveloped state*, 63. Found also in *Christ. Morals*, pt. iii. sect. 11, pt. ii. sect. 5.
 Emphatical word, 99.
 ——— sense, 99.
 Entelechia or soul of our subsistences (Gr. *ἐντελέχεια*), not used exactly in Aristotle's sense of *actuality*, but rather *the perfection or chief excellence of our existence*, 75. The word occurs also in *Rel. Med.* pt. i. sect. 8, p. 19, l. 12 (where see note in *Golden Treas.* ed.), and in *Miscell. Tracts*, xi. vol. iii. p. 258, ed. Bohn.
 Equal, *equitable*, 6.
 Equicrural, *isosceles, having legs of equal length*, 110.
 Equivocal production, *irregular, out of order*, 135. The meaning is that of spontaneous generation, a notion still entertained in Sir Thomas Browne's time.
 Evacuate hopes, *to make void, to nullify*, 68. *Evacuo* is used in the Vulgate as the rendering of St. Paul's *καταργέω* (Rom. iii. 3), and *κενῶω* (1 Cor. i. 17).
 Evulsion, *extraction or pulling out*, 113.
 Exception, *objection, cavil*, 2nd Ep. Ded. xi.
 Excitate, *to arouse*, 58.
 Excoriable, *that may be stripped off, or excoriated*, 147.
 Excursions, *digressions*, Ep. Ded. x.
 Exedrae, *halls, parlours*, 177.
 Exenteration, *disembowelling, evisceration*, 42.
 Exequies, *funeral rites*, 13, 53.
 Exiguity, of seeds, *smallness*, 136.
 Exility, of bones, *weakness, smallness, thinness*, 22. Used also by Bacon.
 Exolution, more properly *exsolution*, in Mystical Theology, *rapturous languor*, 83. Used also in *Christ. Morals*, *in fin.*

Expilators, pillagers, 41.

Explantations, offshoots, 158.

Explication, opening, unfolding, applied to leaves or flowers, 122, 139, 140.

Exsuccous, without juice, dry, 56, 150, 151.

Extenuate, disparage, depreciate, 65.

Fasciated, bound or bandaged up, 120.

Fasciations, bandages, 12, 107.

Favaginites, honeycomb stone, mellilite; an opalescent variety of sapphire, 122. See Plin. Hist. Nat. xxxvii. 47.

Favaginous sockets, resembling a honeycomb, 126.

Feeding the wind, feeding on the wind, 78.

Feretra, biers, 10.

Ferity, barbarity, cruelty, 45. See also Christ. Morals, pt. iii, and Vulgar Errors, bk. vii. ch. 19, sect. 3.

Fictile vessels, moulded by the potter, 43.

Figurations, configuration, giving a certain form, 168.

Flat . . . truths, dull, spiritless, 199. The meaning would seem to be smooth, without relief, as metal plates.

Flatuous, distension, caused by flatus or wind, 134.

Flexures, bends or folds, 146.

Foliaceous, leafy, 134.

Foliations, the forming into leaves, leafing, 126, 170.

Folious emission, leafy, 135. Used also in Christian Morals.

Foraminous roundles, round forms full of holes, 135.

Forceps, a kind of battle-array, 115. (Gell. x. 9.)

Fore-being, pre-existence, 83.

Fore-writers, former writers, Ep. Ded. x.

Frustums, any part, except the vertex, cut off from a cone, 155.

Fulciment, the fulcrum of a lever, 113.

Funerally burnt, 5.

Furdling, furling, 128.

Fusil, spindle-shaped figure in heraldry, 110.

Gallature, treadle of an egg, 138.

Geomancer, a diviner by the earth, 198.

Geometrizeth, how nature, 145.

Geometry of nature, the, 141.

Gloss, to embellish with superficial lustre, 53.

Gomphosis (Gr. γόμφωσις), immovable articulations like teeth in their sockets, 155, 159.

Gustation of God, spiritually tasting, 83.

Handed crosses, cruces ansatæ, 187. (See Edin. Review, 1870, for a valuable dissertation upon the pre-Christian cross in its various forms.)

Handsome account, anticipation, economy, 8, 43, 55, 100, 190.

Handsomely, liberally, skilfully, elegantly, 3, 65, 114, 146, 175, a favourite word of Sir Thomas.

Harmony, ἀρμονία, the union of two bones by simple apposition of their surfaces (Galen, De Oss. procem. tom. ii. p. 137, ed. Kühn), 159.

Hastati, 113, 114.

- Hatches**, *hachures*, short lines in engraving, representing half-tints and shadows, 110.
- Hazardable**, *venturous*, *uncertain*, 42.
- Heads**, most industrious, Ep. Ded. vi, in the sense of *persons*, *intellects*, a favourite word with Sir Thomas.
- Helical roundels**, *spiral*, 155.
- Herbarists**, *herbalists*, 135.
- Herbary**, the art of gardening, 90.
- Herby plants**, of the nature of herbs, 162.
- High**, early, in point of time, 16, 18, 112.
- Hinted**, we were, a hint was given us, we took a hint, Ep. Ded. v.
- Hippodrome urns**, called *echœa*, ἡχέα, Vitruvius, *De Architect.* i. 1. sect. 9: v. 3. sect. 8. Ep. Ded. iv. Vessels of like kind were let into the walls of the theatre, to strengthen the sound, *Vitruv.*; or to imitate the noise of thunder, *Schol. Ar. Nub.* 292 (Liddell and Scott). See also E. B. Denison (Lord Grimthorpe) in *Transactions of R. I. B. A.*, 1855. There are some of these urns in Sir T. B.'s church, St. Peter Mancroft.
- Hold**, to measure, 119; to hold good, 183.
- Holdfasts**, attachments, 164.
- Horny-coat**, the cornea of the eye, 183.
- Hottest use**, severest treatment, 11.
- Houseleek**, a defensative against thunder and lightning, 125. (For this superstition, see Brand's *Popular Antiquities*, iii. 317.)
- Hypogæum**, Jewish, 39.
- Identity**, to reproduce the same as before, 51.
- Ildtyde** (Danish), fire tide, to signify the era of cremation, 26 note.
- Illustrable**, capable of being illustrated, 113.
- Imbibition**, imbibing, sucking, or drinking in, 164.
- Impulsors**, that which communicates impulse or motion, 113.
- Impute**, imputation, 2nd Ep. Ded. xii.
- Incession**, walking, motion, 152.
- Incidence**, angle of, 184 bis.
- Incinerable**, reducible to ashes, 34.
- Incommixed**, unmixed, 43.
- Inconsonant unto reason**, inconsistent with, 58.
- Incorrupted**, uncorrupted, 42.
- Incrassated into jellies**, thickened; **incrassation**, thickening, 33, 134.
- Incremable flax**, incombustible, 43.
- Indenture**, angle of, indentation, 153.
- Indifferently**, impartially, 5. So used in the Prayer Book.
- Infamy of man's nature**, lowness, meanness, a word coined by Southey (*Colloquies* i. 305), as a conjectural emendation in p. 80 for *infamy*.
- Inflexures**, bends or folds, 139.
- Inhumation**, burying, 3, 10, 178.
- Inlays**, inlayings, 157.
- Innitency**, leaning, 113.
- Inservient**, to, conducive to, subservient, 112.
- Integral conservation**, preservation entire, 8.
- Inter-arboration**, spaces in planting trees, 177.

- Intercolumniation**, *space between columns*, 177.
Intermission, *interval*, 177.
Inter-nodial parts of vegetables, *spaces between the joints*, 158.
Inversedly, *upside down*, 130.
Iterated, *repeated*, 58.
Iterately, *by repetition or frequent use*, 40.

Jew's-harp in an urn, 22.

Lacrymatories, *tear-bottles*, 21, 33 *bis*.
Lash, *soft and watery, but without flavour*, 194. "Fruits being unwholesome and lash" (Forby's *Vocabulary of East Anglia*).
Laureat draught, *a picture with laurel*, 106.
Life is but the shadow of death, 182.
Ligature, *application of a bandage*, 178.
Light is but the shadow of God, 182. So in *Rel. Med.* pt. i. sect. 10, "Lux est umbra Dei."
Lixivious liquor, *lixivial, impregnated with alkaline salts*, 48.
Low, late in time; Lower, later, 22, 201.

Madding vices, *making mad*, 72. Cf. "Far from the madding crowd's ignoble strife" (Gray's *Elegy*).
Magnalities, *great works from small beginnings*, 126.
Magnified Cyrus, *celebrated*. See also, magnified Merlin, in *Vulgar Errors*, vii. 16, 1.
Malcontent of Job, *sub., malcontentedness, discontent*, 71. The word is printed in different edd., *male-content, male-content, malecontent, mal-content, and malcontent*.
Mandrakes, *living near an hundred years*, 133, 169.
Maniples, *handfuls*, 2nd Ep. Ded. xi, 113. (Latin *manipulus*, *a company of soldiers*.)
Martyr the records (verb), *to destroy*, Ep. Ded. vi.
Masle (heraldic term), *a lozenge voided*, 110.
Massiest, 2nd Ep. Ded. ix.
Massy, *massive, heavy*, 118, 119. Used also in *Rel. Med.* 204. l. 11.
Maturation of seeds, *ripening, coming to maturity; maturative progress, ripening*, 134 *bis*.
Mercurial characters, *letters or figures relating to Mercury*, 187. See note.
Metropolis of humidity, *chief seat of (the brain)*, 45.
Mind us, *remind*, Ep. Ded. vi.
Miscle-berry, *mistletoe berry*, 123. (Cf. *missel-bird* = *thrush*.)
Mitral crown, *in the shape of a mitre*, 107.
Mounts of the hand, *elevations*, 198.
Mummy, *a liquor distilled from mummies, or from dead bodies*, 79. See note.

Native notes, *birth-marks*, 156; *native posture*, 58.
Nauseating crambe verities, *being sick of*, 199.
Nettle, *to provoke, annoy*, 111.
Nib, spelt by Browne *nebbe*, *generative particle of a plant*, 129, 130, 131 *bis*, 181.

- Niceties, *scruples*, 7.
 Nominations, *naked*, *mere names*, 75.
 Numerist, *one who deals in numbers*, 191.
- Obliquations, *obliquity*, *declination from the right angle*, 149.
 Observables, *things to be observed*, 142.
 Observators, *tutelary*, *defenders*, 72.
 Obtain, *be accepted*, 185.
 Obvert, *turn aside or against*, 170.
 Old in, *long practised*, *experienced*, 2nd Ep. Ded. x.
 Opal, 14. (This opal stone appears to have been a crystal globe, which is frequently discovered in barrows and urns, vide *Nenia*. Or perhaps glass beads.—Douglas, note in J).
 Opinion (verb), *to be of opinion*, *to opine*, 5. Used also in *Rel. Med.* 40. l. 24.
 Oracle of, *to have the*, *to be able to foretell the fate of*, Ep. Ded. iii.
 Ordination, *arrangement*, *order*, of plants, &c., 103, 121, 126, 127, 143, 171, 188.
 Ossuaries, *places for the bones of the dead*, 33, 37, 71.
 Ostracion, *a genus of rough-skinned fishes*, *trunk-fish*, 147.
 Outlast, *to survive*, Ep. Ded. vii, 69.
 Outwear, *to outlast*, 69.
 Over-queried, *too often asked*, 199.
- Palisadoed, *palisadoes*, *palisaded*, *palisades*, 124, 125. The Spanish word was not quite naturalized when Sir T. B. wrote. See Skeat's *Etymological Dictionary*, and comp. "Statua," *infra*.
 Pappous flowers, *furnished with a pappus or down*, 155. (Lat. *papposus*.)
 Paralogical doubt, *illogical*, *unreasonable*, 101. Johnson does not admit the word into his Dictionary, and in his *Life of Browne* gives it as an instance of the superfluous words introduced by him. Sir T. B. also uses *paralogism* and *paralogy* (*Vulgar Errors*, iii. 2: vii. 3).
 Paramours, *lovers* (not in a bad sense), 62, 112.
 Parcels, *eldest*, *oldest numbers or quantities*, Ep. Ded. v, 32, 38.
 Peculiar (subst.); *characteristic*, *special property*, 79.
 Pensile, *hanging*, 91.
 Pentagonally, *so as to have the form of a pentagon*, 139.
 Pentastichus, 112. ΠΕΝΤΑΣΤΙΧΟΝ, Jul. Pollux, *Onomasticon*, ix. vii. 16.
 Perflation, *through current of air*, 163.
 Perihypate meson, 197.
 Perspectives, *perspective glasses*, *telescopes*, 79. Used also in *Rel. Med.* 78. l. 19.
 Phalanx, *Macedonian*, *long thought invincible*, 115.
 Phoenix, *the*, 13.
 Phytology, *a discourse or treatise of plants*, *or the science of plants*, 2nd Ep. Ded. x.
 Piece, a favourite word with Sir T. B., "complete piece," Ep. Ded. vi; "concealed pieces," 31; "neatest pieces," 145; "piece of antiquity," 117; "piece of art," 42; "piece of folly," 73; "piece of gallantry," 102. See *Rel. Med.*
 Plashes, *small pools of standing water*, *puddles*, 159.

- Plures**, like *oi πλείους*, used euphemistically for *the dead*, because the *dead* are more in number than the living (see *Abiit ad plures*). "Quin prius me ad *plures* penetravi?" (Plautus, *Trin.* ii. 2. 14), Ep. Ded. v.
- Point of compute**, *date of reckoning; an epoch*, 27 bis.
- Polar life**, *polar*, such as prevails at the poles, 181.
- Pole star**, the, 121.
- Politickly**, *for political reasons*, 6, 71.
- Ponderation**, *the act of weighing*, 44. (Cf. *Vulgar Errors*, bk. iv. ch. viii.)
- Populosity**, *populousness*, 19.
- Post-geniture**, *the condition of a child born after another in the same family*, 93.
- Precariously**, *doubtfully, with uncertainty*, 154.
- Præcogitations**, *previous thoughts*, 200.
- Prime baronet**, *premier, of the oldest creation*, 2nd Ep. Ded. xi.
- Principals**, *their, original subject-matter*, 2nd Ep. Ded. x.
- Principes**, 113, 114.
- Profundeur** (Mod. Fr., *profondeur*), *depth*, 162.
- Progressional**, *preparatory*, 67.
- Progressionally**, *gradually*, 190.
- Propension unto**, *inclination for*, 70.
- Proprietaries**, *proprietors*, 71.
- Proprieties**, *properties, peculiarities*, 161, 200.
- Pulvinaria**, *cushioned seats*, 106.
- Puncticular**, *comprised in a point, of very small size*, 137.
- Punctilio**, *a point; hence, a very small body*, 131.
- Pyral combustion**, *on a funeral pile*, 57, 61.
- Pyramidally**, *by means of a pyramid*, 72.
- Pyre**, of all things, the final, 6.
- Quadrante**, *a square*, 116, 117, 118 bis, 119. Used by Spenser, *Faery Queen*, II. ix. 22.
- Questuary operation**, *for the sake of profit*, 152.
- Quincuncial**, *having the form of a quincunx*, 2nd Ep. Ded. x, 123, 126, 182.
- Quincunx**, *an arrangement or disposition of things by fives in a square, one being placed in the middle of the square*, 98, 110, 116, 119, 126.
- Quinquernio**, *a set of five*, 95.
- Quintuple**, *fivefold*, 94, 103, 127.
- Radiation**, *disposition of branches*, 162, 180.
- Radication**, *the process of taking root deeply*, 162.
- Rampiers**, *ramparts*, 17.
- Rams' horns**, the plant *Orchis mascula*, 172.
- Rational** (subs.), *an exposition, rationale*, 55.
- Refection**, *refreshment*, 164.
- Regardable**, *worthy of regard or notice*, 146.
- Relation**, to pretend, to claim relationship, Ep. Ded. vii.
- Relentment**, *a moist, softening, relaxation, dissolution*, 6.
- Remarkables**, *remarkable objects*, 112.
- Reparable**, *capable of being repaired or renewed*, 53.
- Required**, *looked for*, 171.
- Resolution**, *solution, explanation*, 25; *dissolution*, 10.

- Resound**, v. a. *to proclaim*, Ep. Ded. iv.
Rested in, *been contented with*, 3, 59, 66, 189.
Retiarie, retiary, net-like, 108, 109, 110, 142.
Reticulate, *formed of net-work*, 109, 127, 147, 148.
Rhetorick of the dead, the sensible, 46. Compare with this Hooker's saying, "That the life of a pious clergyman was visible rhetorick" (Walton's *Life of Hooker*).
Rhombus, or lozenge figure, 115, 126, 143, 172, 174.
Rolsold (Danish?), *burning age* (?), to signify the era of cremation, 26 note.
Rose of Jericho, 159.
Roundle, a round form or figure, 136, 155.
Run, to pursue in thought, to carry in contemplation, Ep. Ded. v.
Run, the highest, the height of the fashion, 7.
Salient animals, moving by leaps, bounding, jumping, 153.
Sallow, willow, 44, 166.
Saltyres, heraldic crosses, formed by the combination of a bend and a bend sinister, 110.
Salve the individuality, to cure or remedy, 51. According to Gardiner, as if from A. S. *seal fian*, but more correctly from Lat. *salvo*, meaning "to help or save by a salvo," an excuse or reservation (Johnson). See *Rel. Med.* 379.
Salved, tolerably, 40. See also *Vulgar Errors*, p. 250. l. 22.
Sation, sowing or planting, 172.
Scrupulous, not, without any objection, 11.
Seases and sockets, 152. See note.
Sea starre, the star-fish, 197.
Self-killer, suicide, 60.
Sella curulis, or ædyle chairs, 108.
Seminal, seminality, productive, the power of production, 131, 133, 135, 136, 154, 179, 181.
Seminal humour, 45.
Septuagint expression, according to the LXX, 24.
Sesqui-tertian, having the ratio of one and one-third to one, 158.
Shake hands with, to say farewell to, give up, 201. The expression is used also in *Rel. Med.* 8. l. 28; 66. l. 10.
Sheet, printed page, book, 2nd Ep. Ded. x.
Signalit, meaning, signification, 98.
Smallage, an umbelliferous plant, Apium graveolens, called also, especially as improved by cultivation, celery, 61.
Smart, quick, vigorous, 3, 77; **smartly**, 37.
Sockets, of bones and plants, 123, 126, 141, 152, 155.
Solisequious plants, following the sun, 165.
Solstitially, at the solstices, 166.
Specious, beautiful, 41, 66, 69, 102.
Speran, used as a contraction for spermaceti, an animal substance used for lighting, 34.
Spermatical, pertaining to the seed, 134.
Sphericity, spherical character, 193.
Spicated, having the form of a spike or ear; arranged in a spike, 126, 155.

Spicous, spicose, eared like corn, 123.

Spindles, stalks, 176.

Spring anything new, to, to produce quickly or unexpectedly, 2nd Ep. Ded. x.

Spruce subject, a, fine, 2nd Ep. Ded. xi. Johnson says of this word, that it was "anciently used of things with a serious meaning; it is now used only of persons, and with levity."

Squamous, covered with scales, scaly, 123.

Staminous, stamineous, 128.

Statua, statue, 31, 103. The Latin form of the word shows that it had not been completely naturalized in English in Sir T. B.'s time. He uses it in *Rel. Med.* 107. l. 14. It occurs four times in W. A. Wright's ed. of Bacon's *Essays*, 112, 157, 182, 192.

Sticked not, hesitated not, scrupled not, 9.

Students of perpetuity, seekers after immortality, 75.

Supinity of elder days, negligence, supineness, carelessness, Ep. Ded. vi. Also used in *Vulgar Errors*.

Tartarus of hell, the place of torment after death, 60.

Technology, doctrine or system of the useful arts, 192.

Tedious, weary, tired, 71.

Tegument, covering, 32.

Telary, in a web-like manner, 156.

Telesmes, talismans, a kind of amulet or magical charm, 97.

Temerarious, unreasonably adventurous, 64.

Tenacles (Lat. tenaculum), little hooks, 164.

Tenuifolious, having thin or narrow leaves, 176.

Teretous, terete, cylindrical and slightly tapering, 176.

Testaceous, of earthenware, 31.

Textury, the art of weaving, 111.

Thick-skinned, of dense understanding, 13.

Thin, rare, scarce, Ep. Ded. vi.

Thrums, the thread-like, internal bushy parts of a flower, 155.

Thwart enclosure, thwarting, across something else, transverse, 128, 153.

Tortile, twisted, wreathed, 160.

Tranquillity, possess their constitutions in, i.e., are of tranquil constitution (cf. St. Luke xxi. 19), 67.

Transcorporating philosophers, believers in the doctrine of the transmigration of souls, 55.

Transmuteth, changes into a different substance (alluding to the theory of transmutation of metals), 45.

Transome, a thwart-piece across a double window, &c., 96. From Lat. *transtrum*, see Skeat's *Etymological Dictionary*.

Transvertible, capable of being inverted, 130.

Treddles, treadle, a step, 138. The albuminous cords which unite the yolk of the egg to the white, so called because formerly supposed to be the sperm of the cock.

Triarii, 113, 114.

Triquetrous, having three salient angles or edges, the faces between them being concave; three edged; trigonal, 105.

Trite learning, commonplace, hackneyed, 2nd Ep. Ded. x.

- Tulipists, *people engaged in cultivating tulips*, 2nd Ep. Ded. xii.
 Tutelary, *protecting*, 72, 148.
- U finita, *a rule without exception*, 2nd Ep. Ded. xi. In allusion to the prosodical rule in the old Latin grammar, "U finita producantur omnia," the last syllable of every word ending in *u* is long.
- Uliginous coats, *muddy, slimy*, 179.
 Umbrella of elder, *the*, 125.
 Unconcerned, *not relative*, 98.
 Uncous, *hook-like, hooked*, 124.
 Undiscernable, *indistinguishable, invisible*, 136.
 Undiscerned, *uncertain*, 135.
 Undoing, *ruinously expensive*, 81.
 Unition, *joining, union*, 158.
 Univocacy, *regularity, certain order*, 135. Cf. "equivocal," *supra*.
 Unto, *that is comparable unto*, 71. See Note.
 Unwish itself, *to wish never to have been*, 71. In *Vulgar Errors*, Bk. i. ch. 10, p. 77, ed. Bohn, we find "to unwish their own being."
 Ὑπομόχλιον, *the fulcrum of a lever*, 113.
 Urging fire, *fierce, devouring*, 43.
 Urnal, *in urns*, 9, 48.
 Use, *hottest*, 14. See *hottest*.
 Ustrina, *the place for burning dead bodies*, 15.
- Vacuities, *open spaces*, 114, 117.
 Vagrant vision, *unconfined eyesight*, 178. . .
 Vaired coats, *charged with vair, the heraldic expression for the skin of the squirrel*, 110. See Note.
 Valediction, *a farewell*, 19, 56.
 Vas ustrinum, 43.
 Vegetable shop, *order, kingdom*, 200. The meaning here of "shop" seems to be the source or place where anything is made. Thus, "the shop of the whole body" (Shakespeare, *Coriolanus* i. 1).
 Veneficial, *injurious, bewitching*, 199.
 Venially, *pardonably, excusably*, 2nd Ep. Ded. x, xi.
 Verticities, *revolutions, rotations*, 198.
 Vineal, *consisting of vines*, 100.
 Vinosity, *vinous character or quality*, 33.
 Volutation, *a rolling, as of a sphere on a plane surface*, 141.
- Warily observes, *cautiously*, 166. Used also by Marlowe, *Jew of Malta* i. 1.
 Waved the fiery solution, *abandoned, gave up*, 8. The spelling *wave*, for the more modern form *waive*, is continued by Johnson, who does not give *waive* in his Dictionary.
 Wedge of Britain, *corner of the coast*, 17.
 Wide, *within wide limits, not precise*, 71.
 Wingy divisions, *resembling wings*, 181.
- Yew-trees, *why planted in churchyards*, 57.